TEXTILE BULLETIN

VOL. 62 MARCH 15, 1942 NO. 2

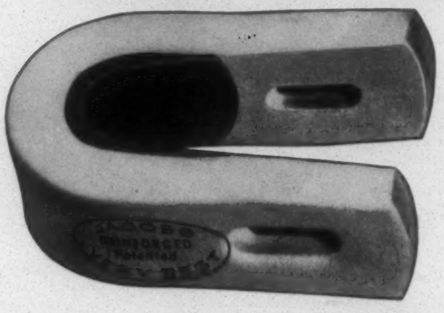
JACOBS

VERYBEST REINFORCED

LUG STRAPS

SAVE RUBBER for the Government; get longer, better service by equipping your looms with JACOBS Verybest (non-rubber) Lug Straps.

They are guaranteed to last twice as long as any other lug straps on the market.



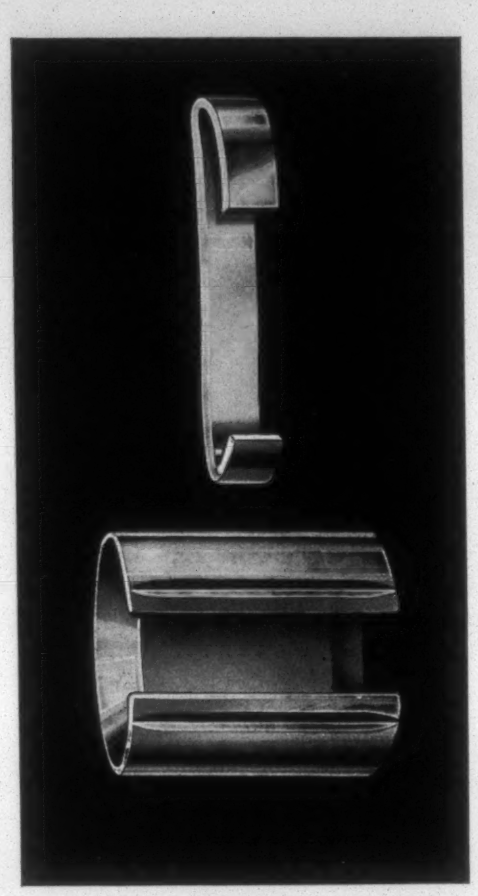
Made of best quality army duck and fused with special hide glue, these lug straps are built to withstand the heavy impact of modern looms and high-speed production.

Ask Your Supply House to Show You Samples of Jacobs Reinforced Lug Straps

E. H. JACOBS MFG. CO.
ESTABLISHED 1869
DANIELSON, CONN. CHARLOTTE, N. C.

INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE AUG 42
CHAPEL HILL N C 2304

A Traveler for Every Fibre



BEVEL EDGE

The Bowen Patented Bevel Edge feature of U. S. Ring Travelers produces ideally smooth, even yarn. There are no angular edges to flatten the end. There are no split ends in throwing rayon—no fly waste in the spinning and twisting of cotton, wool, worsted, asbestos, kindred fibres. Made and stocked in all sizes and weights, for all kinds and counts of yarns.

Keep'em Spinning!

BOWEN Travelers are not just "fair weather" friends. They are made to stand the gaff when the going is toughest—as in the present emergency when machines are geared to peak production, many of them 24 hours a day, and when faulty work is costlier than ever before.

Day in and day out, BOWEN PATENTED U. S. RING TRAVELERS produce smooth, even, kink-free yarn because they are manufactured from the very best materials by skilled workmen.

U. S. Travelers will help you "Keep 'em Spinning" at Top Speed and Top Quality in the Months Ahead.

Sold under the trade names: Bowen Round Point Travelers; Bowen Square Point Travelers; Bowen Improved Vertical Bronze; Bowen Patented Bevel Edge; Bowen Patented Ne-Bow Vertical; Bowen Patented Vertical; Bowen Patented Vertical Offset; Bowen Flat Oval and Round Wire Travelers.

U. S. RING TRAVELER CO.

PROVIDENCE, R. I. AMOS M. BOWEN, Pres. and Treas. **GREENVILLE, S. C.**

SOUTHERN SALES REPRESENTATIVES

T. L. Maynard
P. O. Box 456
Belmont, N. C.

William P. Vaughan and William H. Rose
P. O. Box 792, Greenville, S. C.

Oliver B. Land
P. O. Box 158
Athens, Georgia

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

To determine yard speed, wind for two minutes, break the yarn, reel it to measure yardage in a two-minute run. Use a half-full cone.

THE ROTO-CONER*...

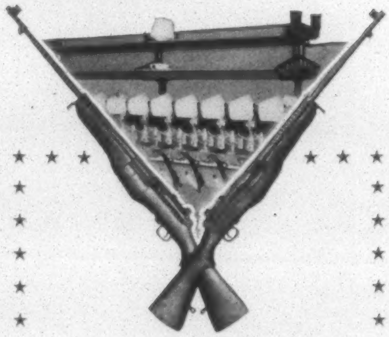
the low-investment, high-production winder

The Roto-Coner is the high-speed winder,* limited only by the winding qualities of the yarn. Cones of cotton knitting yarn are produced at 550 yards per minute . . . dyeing packages, and tubes of sales yarn at 450 y. p. m....wood cones at 750 y.p.m.

Higher speed means fewer spindles. Due to these high speeds, it is possible to get required production with fewer spindles. This saves initial investment, floor space and power.

Maximum production — continuously. Both coarse and fine counts can be wound at the same high speed. The standard rotating traverse produces quality packages of all sizes of yarn at this high speed and with a minimum number of winds.

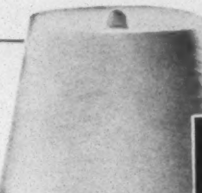
Lowest expense for maintenance and repair. The Roto-Coner's* modern design means trouble-free operation, and the small number of parts reduces maintenance and repair. Despite higher winding speeds, there are no fast-moving parts to be greased, cleaned or frequently replaced. Oiling of all moving parts is entirely automatic.



Universal—manufacturer of precision machinery—aids defense by manufacturing precision parts for military equipment.

See our catalog in TEXTILE YEARBOOK

*Reg. U. S. Pat. Off.



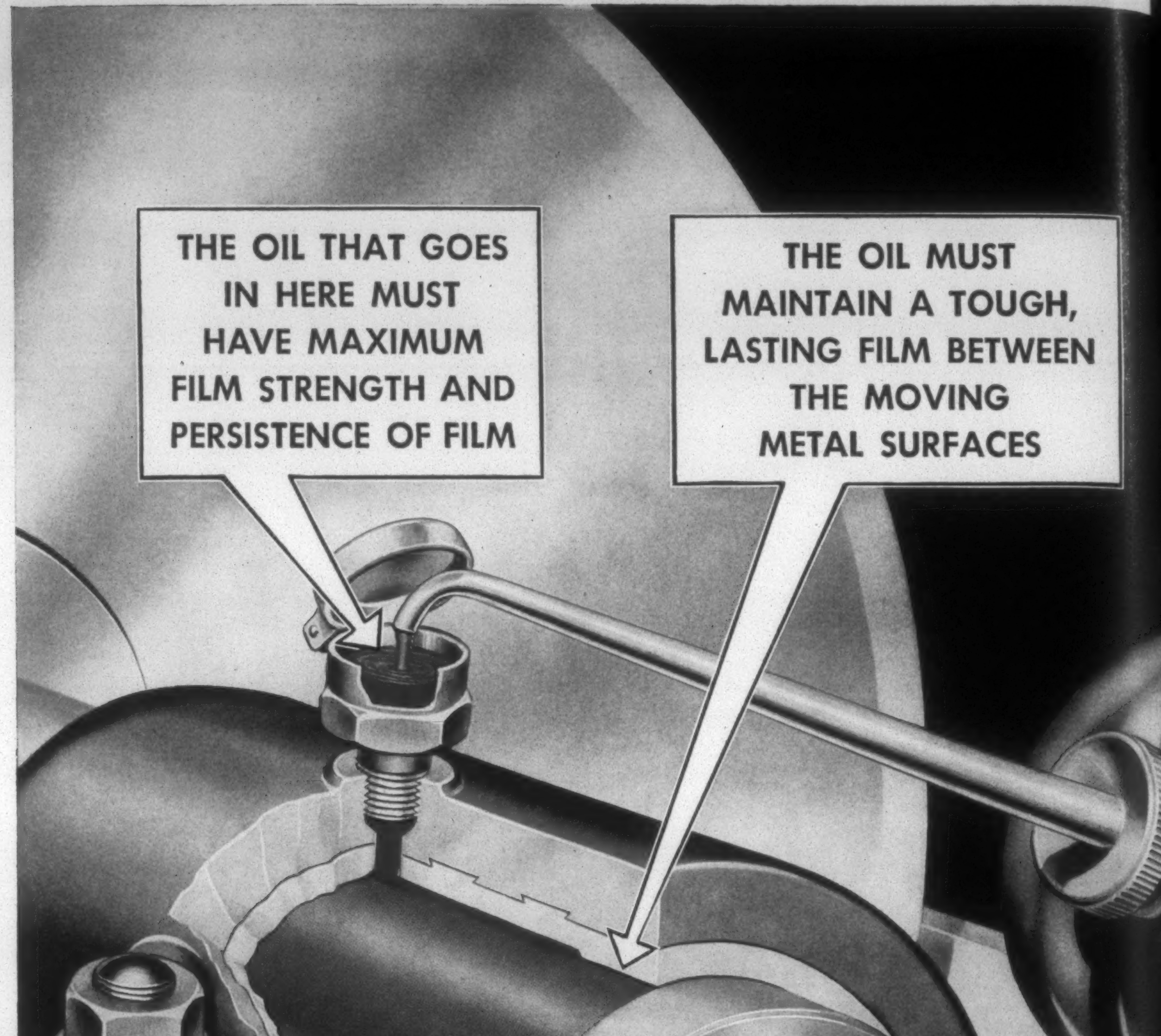
ROTO-CONER LEESONA Reg. U. S. Pat. Off.

OPEN-WIND CONES FOR KNITTING

DYEING PACKAGES — PARALLEL TUBES FOR TWISTING

UNIVERSAL WINDING COMPANY P. O. BOX 1605 **PROVIDENCE, R. I.**

BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA


THE OIL THAT GOES IN HERE MUST HAVE MAXIMUM FILM STRENGTH AND PERSISTENCE OF FILM
THE OIL MUST MAINTAIN A TOUGH, LASTING FILM BETWEEN THE MOVING METAL SURFACES

Here's where Spotting Begins—or Ends!

THE "CORRECT" ANSWER TO THE PROBLEM OF "OIL THROW" IN CAPACITY TEXTILE PRODUCTION:

Problem: Just after hand oiling, a bearing is *flooded*... safe from failure. Just before the next oiling, it may be starved... with only a microscopically thin film between the moving parts.

On textile machinery, oversupply of oil causes excessive leakage which results in "oil throw" and spotting. Therefore, oil must be applied sparingly at regular intervals.

This means a tissue-thin film only is maintained to retard friction, wear, and high power consumption. That's "boundary lubrication."

Answer: To meet those conditions, you need an oil with maximum film strength and persistence of film. It must have easy-scouring properties to make possible quick removal of accidental stains.

Gargoyle Vactra Oils were developed with exactly these characteristics. These oils cling tightly to bearing surfaces... help you minimize wear and power consumption, even with restricted application.

O HELP MAINTAIN CAPACITY PRODUCTION, CALL IN

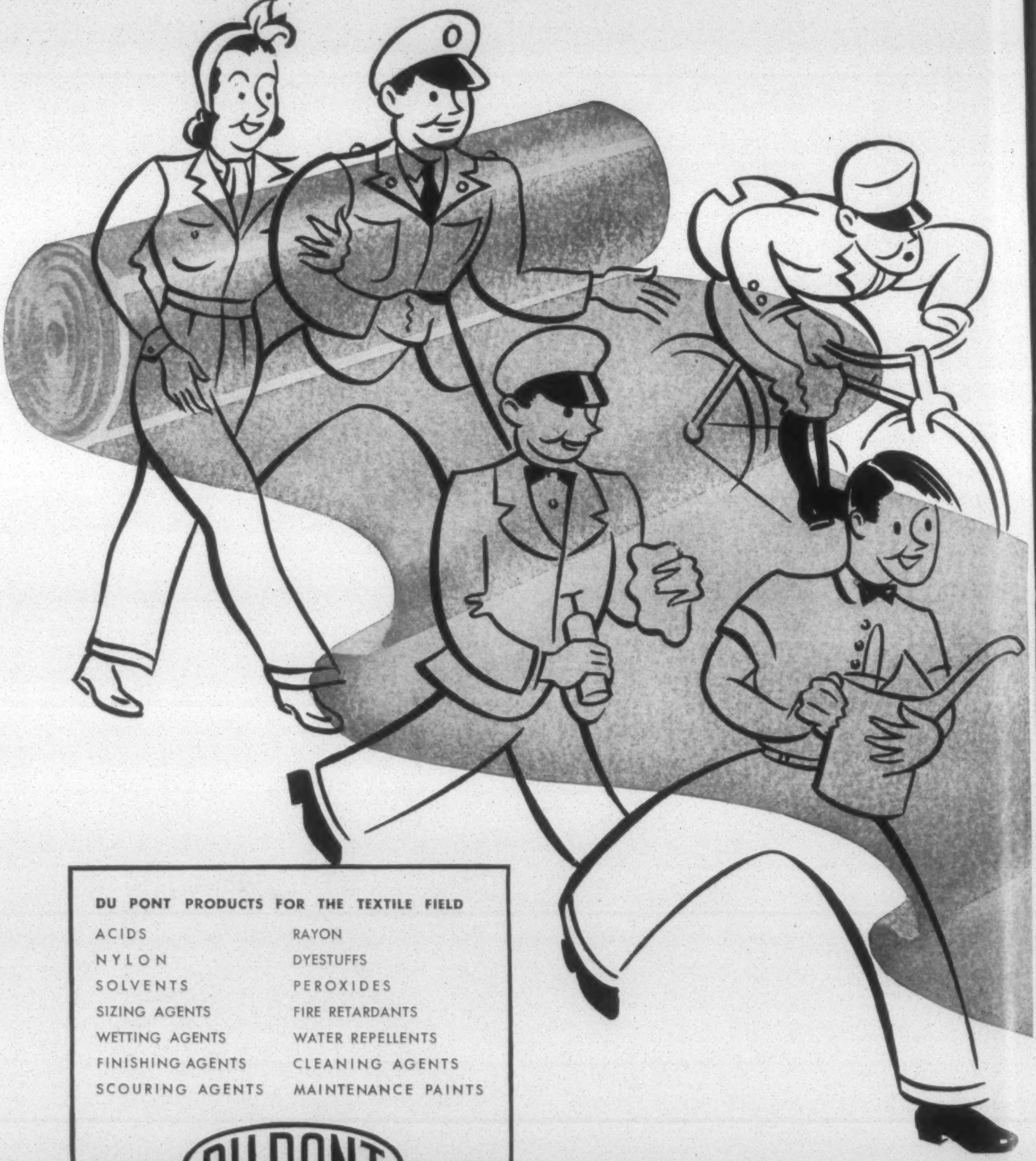
SOCONY-VACUUM for "Correct Lubrication"

SOCONY-VACUUM OIL CO., INC.—Standard Oil of N. Y. Div.—White Star Div.
Lubrite Div.—Chicago Div.—White Eagle Div.—Wadhams Div.—Southeastern Div.
(Baltimore)—Magnolia Petroleum Company—General Petroleum Corporation of Calif.

GARGOYLE
Lubricants

ONE OF A SERIES *of advertisements designed to keep you posted on Du Pont products and services.*

How Du Pont C



DU PONT PRODUCTS FOR THE TEXTILE FIELD

ACIDS	RAYON
NYLON	DYESTUFFS
SOLVENTS	PEROXIDES
SIZING AGENTS	FIRE RETARDANTS
WETTING AGENTS	WATER REPELLENTS
FINISHING AGENTS	CLEANING AGENTS
SCOURING AGENTS	MAINTENANCE PAINTS

DU PONT
REG. U. S. PAT. OFF.

Listen to "Cavalcade of America" every Monday evening over coast-to-coast NBC Red Network.

THE M
ica is ref
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attentio
Pont C
garmen

Vat D
spiratio
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"Oil F

Chemicals Add *Service* to Service Clothing

THE MOBILIZATION of Amer-ca is reflected in the increasing demand for work and service clothing. Serviceability is the first consideration, and its importance directs attention to the use of these Du Pont Chemicals that help service garments give more service.

Vat Dyes stand up under sun, perspiration, oil, grease and laundering. They come through the famous "Oil Fields Test"—scrubbing with lye solution and drying with high pressure steam—strong and fresh.

"Zelan"* is Du Pont's long-chain nitrogen complex which imparts a durable, water-repellent, soft finish to cottons, rayons and other fabrics. It provides real protection against rain, non-oily stains and perspiration—even after many washings or dry cleanings.

"Aridex"* water repellent gives stain and spot resistance, and water repellency to woolens, worsteds and many other types of fabrics. It permits healthful free circulation of air because it does not coat or seal the cloth. Many laundries and dry cleaners now reprocess garments with this wax type repellent.

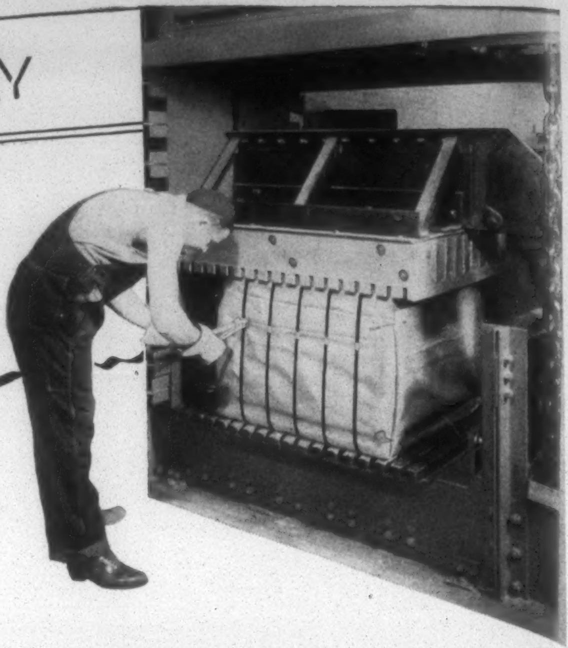
Fire Retardants are easily and quickly applied. They prevent spread of flame and afterglow. *Write for sample swatches.*

E. I. DU PONT DE NEMOURS & COMPANY (INC.)
WILMINGTON, DELAWARE

* Trade Mark
Reg. U. S. Pat. Off.

ORDER OF THE DAY

Utmost speed in delivery
of vital textile products

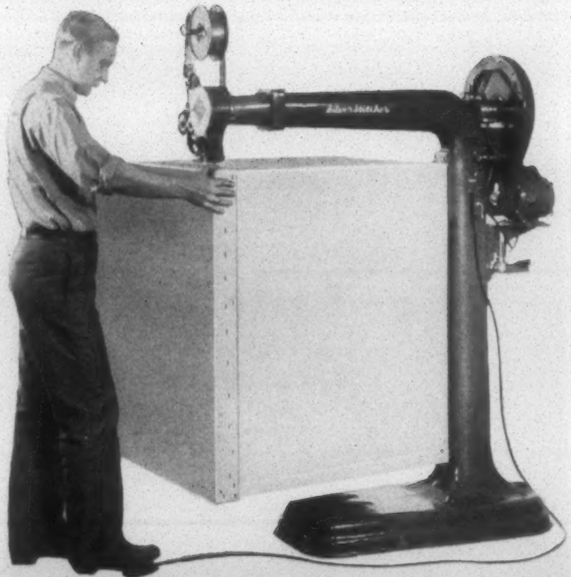


ACME STEEL PRODUCTS MAKE TEXTILE SHIPMENTS "Bound to Get There" FASTER

TODAY'S war program demands textiles and more textiles — and it demands them quickly. Acme Steel products aid many mills to get more speed in the packing rooms — and keep shipping in step with production.

Used for baling (upper right) Acme Bale Tie Bands make possible the compressed type of pack which saves valuable shipping and storage space. Tare weight too, is reduced — thereby lowering shipping costs.

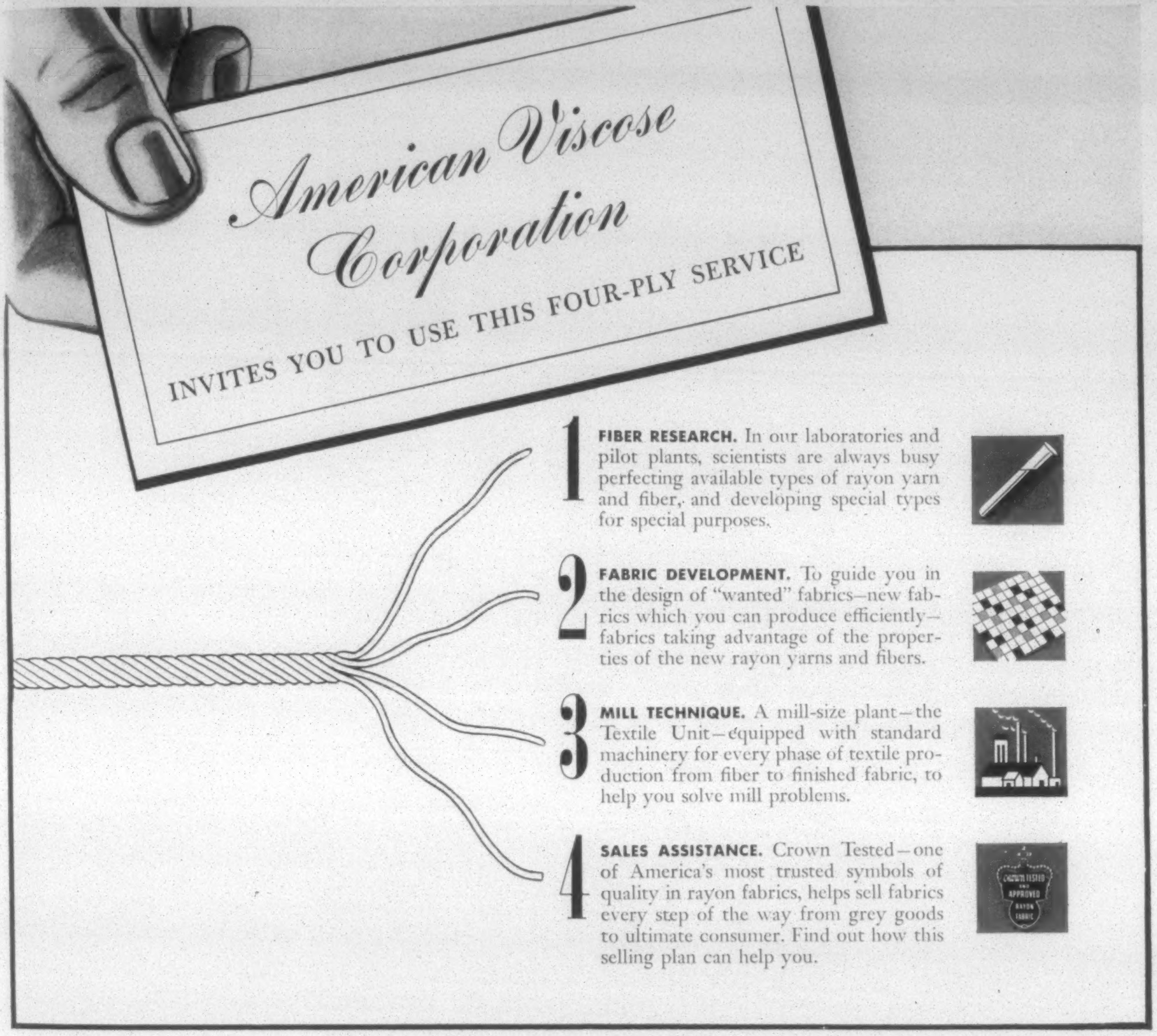
The illustration (middle right) shows comforters, destined for the U. S. Army, being packed easily and quickly by the Acme Steelstrap Process. The automatically seal-fed strapping tool used by the operator speedily tensions, seals and cuts the strap with two easy movements. Note the handy Acme Reel Stand which accommodates a coil of strap as well as the seals.



A combination of Acme Steelstrap and Acme Silverstitcher advantages are being realized by many textile men. Box stitching is faster and easier with Acme Silverstitchers (lower right). Often sealing costs are cut as much as 50%. There is an Acme Silverstitcher for every carton stitching application.

Write today for full information on Acme Steelstrap, Bale Tie Bands and Silverstitchers . . . to help you assure the fast, safe and economical arrival of your Victory products.

ACME STEEL COMPANY 2827 ARCHER AVENUE, CHICAGO, ILLINOIS



American Viscose Corporation

INVITES YOU TO USE THIS FOUR-PLY SERVICE

1 **FIBER RESEARCH.** In our laboratories and pilot plants, scientists are always busy perfecting available types of rayon yarn and fiber, and developing special types for special purposes.

2 **FABRIC DEVELOPMENT.** To guide you in the design of "wanted" fabrics—new fabrics which you can produce efficiently—fabrics taking advantage of the properties of the new rayon yarns and fibers.

3 **MILL TECHNIQUE.** A mill-size plant—the Textile Unit—equipped with standard machinery for every phase of textile production from fiber to finished fabric, to help you solve mill problems.

4 **SALES ASSISTANCE.** Crown Tested—one of America's most trusted symbols of quality in rayon fabrics, helps sell fabrics every step of the way from grey goods to ultimate consumer. Find out how this selling plan can help you.

CROWN* RAYON is today going into scores of new fabrics. New blends, new weaves, new finishes are appearing almost daily, as market after market turns to this versatile fiber. Amid this welter of new developments, questions are bound to arise—especially among producers whose previous experience with rayon has been limited.

It is to these new users of rayon, as well as to those who are employing rayon in new applications, that our FOUR-PLY SERVICE is devoted. If you have a question involving rayon—from the properties of the fiber to the sale of finished fabrics—it may pay you to bring that question direct to a great rayon headquarters—to American Viscose Corporation. Here, without a penny of cost, you will get practical assistance from men skilled in solving textile problems. We welcome every opportunity to help you.

SALES OFFICES: New York, N. Y.; Charlotte, N. C.; Providence, R. I.; Philadelphia, Pa.

PLANTS AT: Marcus Hook, Pa.; Roanoke, Va.; Parkersburg, W. Va.; Lewistown, Pa.; Meadville, Pa.; Nitro, W. Va.; Front Royal, Va.

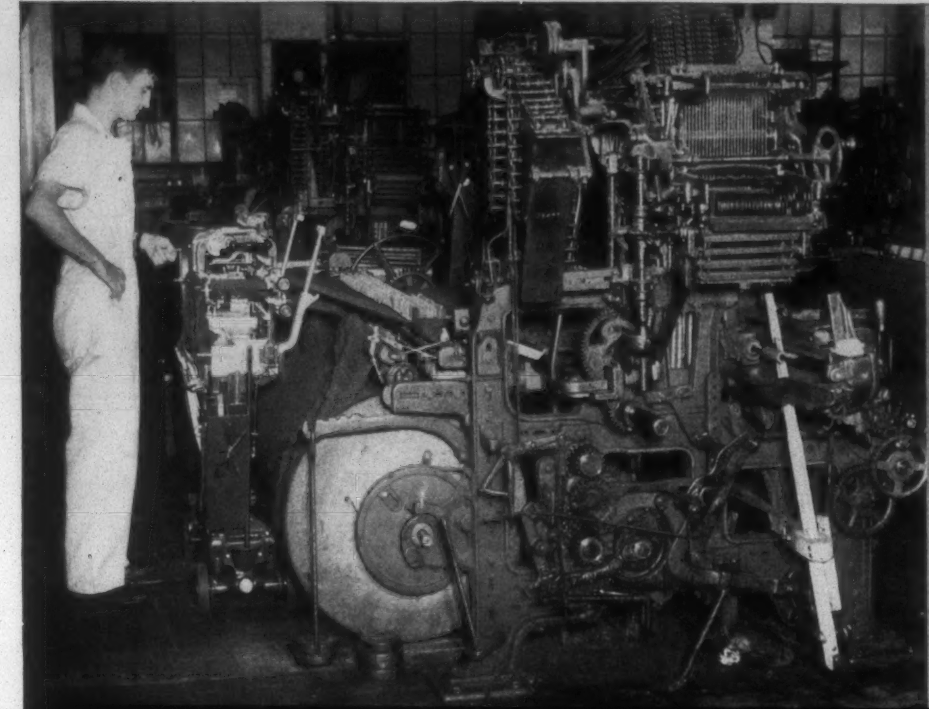
CROWN TESTED AND APPROVED RAYON FABRIC

AMERICAN VISCOSE CORPORATION

WORLD'S LARGEST PRODUCER OF RAYON YARN

*Reg. U. S. Pat. Off.

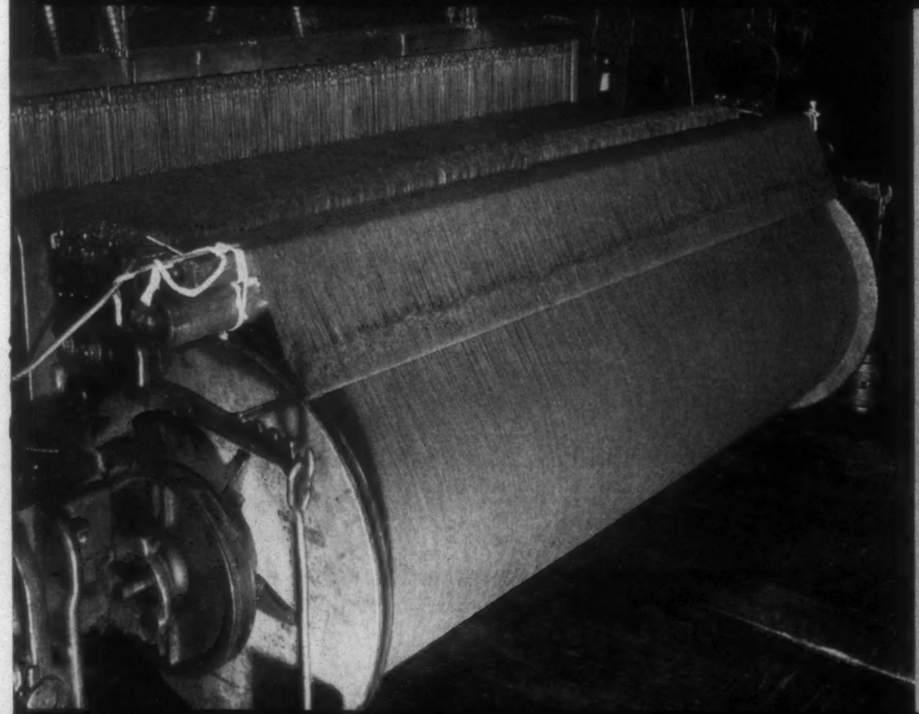
Copr. 1942—American Viscose Corp.



BARBER-COLMAN
Portable
WARP TYING
MACHINE
MODEL "LS"

TYING-IN WOOLEN WARPS... AT THE LOOM!

LOW COST WARP REPLENISHMENT - HIGHEST QUALITY RESULTS



Above, operator using Model "LS" machine equipped with new tying mechanism for woolen yarns. Left, woolen warp completely tied-in at the loom. These pictures were made in a prominent mill which manufactures automobile upholstery fabrics and blankets.

BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS, U. S. A.
FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

Arrows point to defense fabrics for which we have dyed many thousands of pounds.

OUR CONTRIBUTION TO IT

Any industrial service which speeds up defense production makes a contribution to victory. Here's how Franklin Process Yarn Dyeing Service does it:—

1. It eliminates waiting for yarns to be spun from dyed stock.

2. Having large stocks of natural yarn in all four plants and unequalled package dyeing capacity, it can make prompt deliveries.

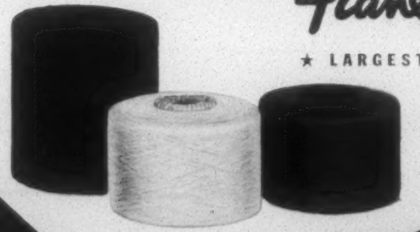
3. Having adequate twisting and winding equipment, it can deliver special as well as standard constructions on any usual put-up.

FRANKLIN PROCESS • Providence, Philadelphia, Greenville, Chattanooga; New York Rep., 40 Worth St.; Chicago Rep., 100 West Monroe St.

Let's work together for victory.

Franklin Process

★ LARGEST PACKAGE DYERS IN THE WORLD



ICTORY

Your Looms

Built for Peace Time Weaves

Can Be Changed

To

Looms for War Contracts

Normal Service
Continues on
Loom Repairs
Shuttles and
Bobbins

Our Government is Going to Require → that the larger part of the Looms of our Country fall in line on the Program for War Time Fabrics

→ Your Looms can be made to fit into that Program

→ Shelter Tent Duck—for instance—is being made on E Model Looms

→ Somewhere down the list of Needed Fabrics is the one You Can Make

We Can Supply The Necessary Parts → To change over the average loom—be it one of our older models or a loom of the X Series—to weave a Wide Range of Fabrics that are needed by our Army, our Navy and our Air Corps

Let's Talk It Over

DRAPER CORPORATION
Hopedale Massachusetts
Atlanta Georgia   Spartanburg S C

Army, Navy and Marine Corps

WOOLEN AND WORSTED FABRICS

GDC dyestuffs for the coloring of woolens and worsteds for Government work insure:

FASTNESS TO LIGHT

FASTNESS TO WEAR

LEVEL DYEING

UNIFORMITY OF PIECE TO PIECE

GDC Dyestuffs for O D and Navy fabrics are the result of long experience and progressive research. Our technical specialists in Government work are available for consultation at any time.

GENERAL DYESTUFF CORPORATION

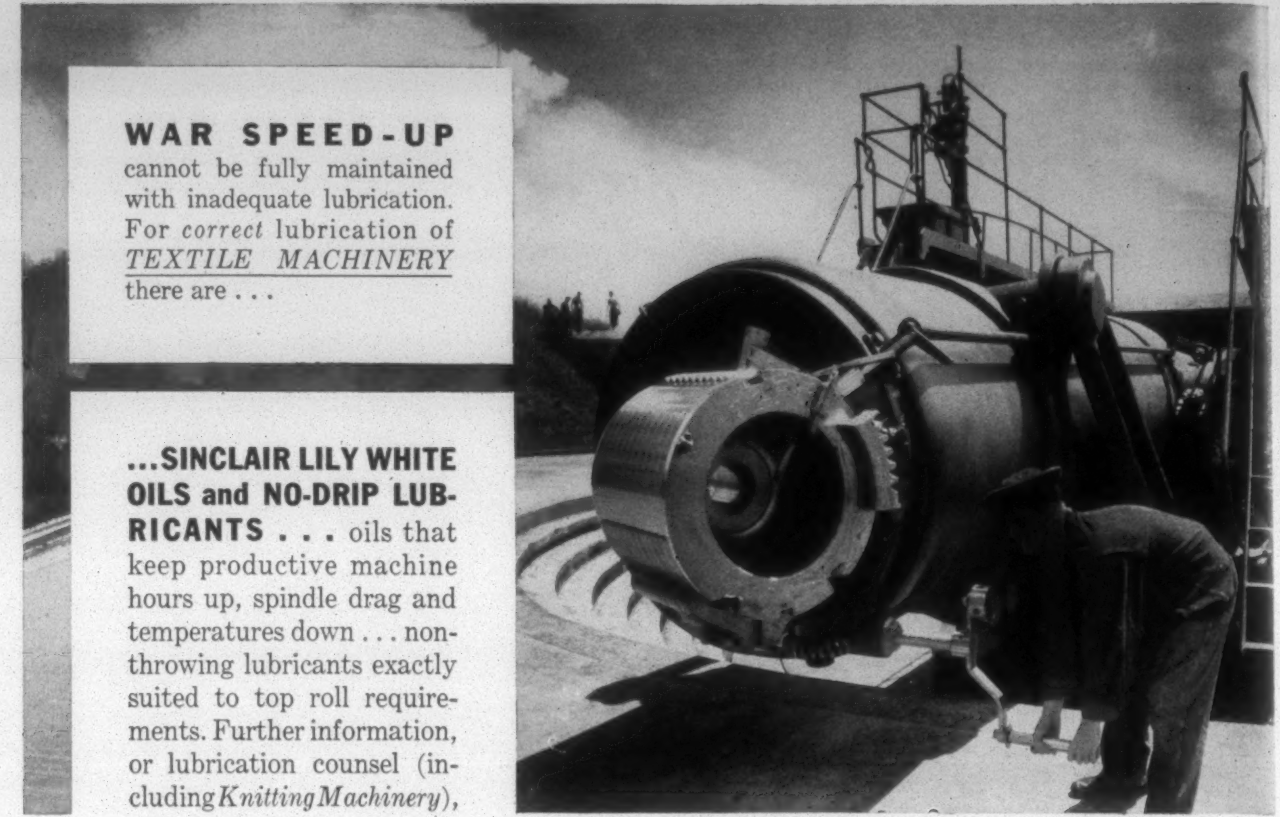
435 HUDSON STREET · NEW YORK CITY

BOSTON · CHARLOTTE · CHICAGO · PHILADELPHIA · PROVIDENCE · SAN FRANCISCO

WAR SPEED-UP cannot be fully maintained with inadequate lubrication. For *correct* lubrication of *TEXTILE MACHINERY* there are . . .

. . . SINCLAIR LILY WHITE OILS and NO-DRIP LUBRICANTS . . . oils that keep productive machine hours up, spindle drag and temperatures down . . . non-throwing lubricants exactly suited to top roll requirements. Further information, or lubrication counsel (including *Knitting Machinery*), may be had by writing to nearest Sinclair office, or to Sinclair Refining Company, 630 Fifth Avenue, New York, New York.

Write for "The Service Factor"—a free publication devoted to the solution of lubricating problems.



CARDING MACHINES *(Saco-Lowell) in plant of Cotton Specialties Co., Chicago. Lubricated 10 years with Sinclair Oil.*

SINCLAIR TEXTILE LUBRICANTS

SINCLAIR REFINING COMPANY (Inc.)

2540 West Cermak Road
Chicago

10 West 51st Street
New York City

Rialto Bldg.
Kansas City

573 West Peachtree Street
Atlanta

Fair Building
Ft. Worth

ABP

TEXTILE BULLETIN

MEMBER AUDIT BUREAU OF CIRCULATIONS

Vol. 62 March 15, 1942 No. 2

It's Late, AMERICA!

(From The New York World-Telegram)

THE nation needs to awaken to the full gravity of the peril that confronts it.

It needs to appreciate how badly we have been defeated in three months of war.

It needs to understand that it is possible for the United Nations and the United States to lose this war and suffer the fate of France—and that this possibility may become a probability if the present tide does not change.

It needs to realize that there is grave chance of the Japanese pushing through India and the Germans driving through the Near East, to join their armies and resources in an almost unbeatable combination.

It needs to get away, once and for all, from the comforting feeling that while we may lose at the start we are bound to win in the end.

Only when fully aware of existing perils will the United States do its utmost. Pray God that awareness will not come too late, as it did in France!

Production Director Donald Nelson appeals for vastly increased industrial output on a 24-hour, seven-day basis—168 hours a week. Maximum production, in short.

Can we get it?

Not on the present basis—not under the psychology of recent years.

Not until we quit thinking in terms of less work for more money.

Not while there is greater concern about overtime pay than overtime production.

Not while farmer politicians are more interested in higher prices than raising more essentials.

Not while Government bureaus—created to meet a depression emergency that is ended—continue to grab for themselves money needed for armaments.

Not while an army of Federal press agents clamors to promote and perpetuate activities that have no present need or value.

Not while Congressmen try to put over useless canals and river schemes and take up the time of defense officials clamoring for factories and contracts as if war were a great gravy train.

Not while WPA, despite a shortage of labor, seeks to carry on projects which it doesn't have the men to perform or the need for performing.

Not while CCC and NYA stretch greedy hands for funds to pamper young men who ought to be in the armed forces or the war plants.

Not while strikes hamper war production, despite a solemn promise that they would stop.

Not while the life-and-death need for uninterrupted production is used as a weapon to put over the closed shop.

Not while double time is demanded for Sunday work which is only part of a 40-hour week.

Not while a man can't be employed on an Army project or in a war plant until he pays $20 to $50 or more to a labor racketeer.

Not while criminal gangs control employment and allocation of men to work on the Normandie and the other ships along New York's vast waterfront.

Not while fifth columnists are pampered and enemy aliens move freely in defense areas.

Not while the grim job of preparing our home communities against air raids and sabotage is summed up with a lot of high-faluting', boondoggling, social service activity.

Not while pressure blocks clamor for higher benefits, bounties and pensions.

We will not get maximum production, in short, unless, first, we fully realize our awful peril; and, second, get over the gimmes of recent years.

Gimme shorter hours, gimme higher wages, gimme bigger profits, gimme more overtime, gimme less work, gimme more pensions, gimme greater crop benefits, gimme more appropriations and patronage, gimme plants for my Congressional district, gimme fees and dues to work for Uncle Sam, gimme ham 'n' eggs, gimme share-the-wealth, gimme $30 every Thursday.

France had the gimmes, too—had them till the Germans were close to Paris. Then everybody went frantically to work—too late.

France has no gimmes today—except gimme food for my baby, gimme a place to lay my head, gimme death.

Tests of Cottons Manufactured Under Different Card Speeds

By G. H. Dunlap

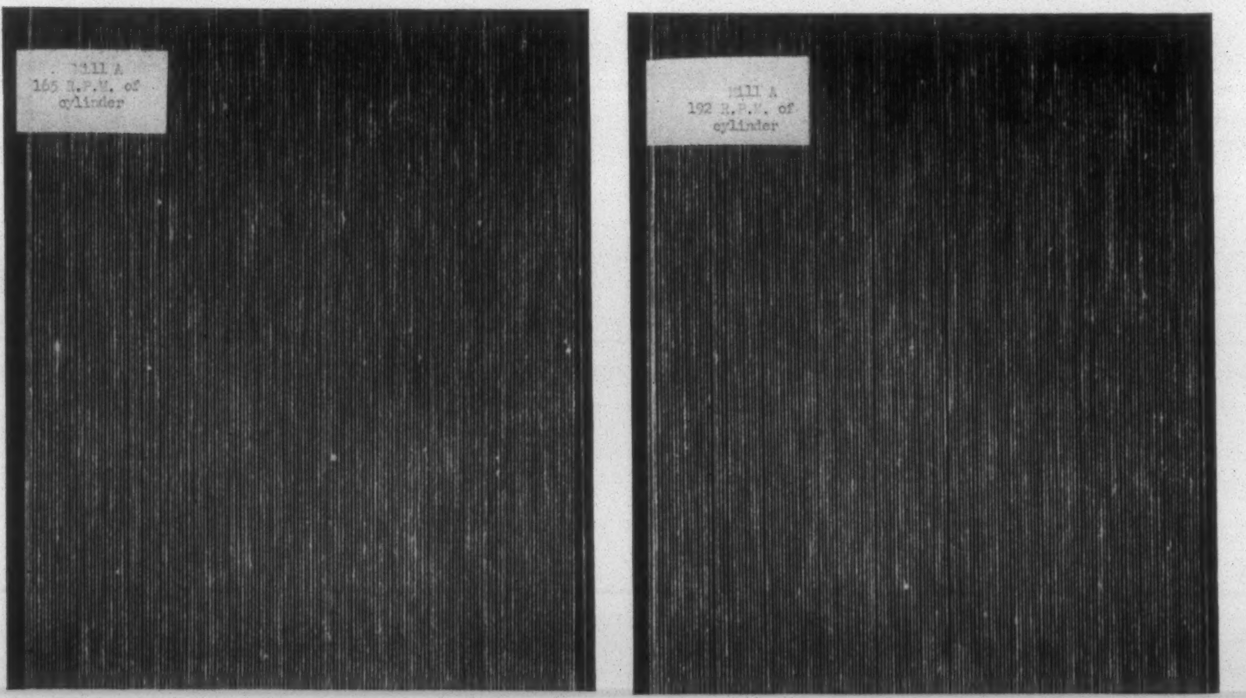
Presented here is the first report of a number of practical mill tests that are being conducted under the supervision of Mr. Dunlap. The research program is under the sponsorship of The Textile Foundation, Southern Textile Association, and The Arkwrights, and is aimed at improving plant operations in the cotton textile industry. Tests are conducted in various mills by the mill's own personnel, under the general supervision of Mr. Dunlap, who in turn correlates the work of the various mills, makes tests in a Government laboratory for results of tests on yarns and cloth. Results of various other tests will be released, through the trade press, from time to time.

UNDER the present emergency, cotton manufacturers have been considering all possible ways and means of increasing production without a sacrifice of quality. One possibility suggested was the speeding up of the cards. In this connection there were two questions to be answered: (1) Can cards be operated efficiently at speeds greater than the commonly accepted maximum of 165 R.P.M.? (2) Can yarn be produced at these increased speeds without sacrifice of quality? In an effort to answer the foregoing questions arrangements were made with fifteen different cotton mills, scattered over the Southern States, to conduct comparative tests on card cylinder speeds.

In view of the considerable interest shown in the project, the following preliminary report, summarizing the results of card speed tests made in two of the fifteen mills, is issued at this time as a matter of information. These data are, of course, only indicative and no conclusions may be drawn until the results of the tests being made in the other thirteen mills are also available for comparison and analysis. Upon completion of the test, the results will be analyzed and published.

In the two tests reported, the increased cylinder speeds were obtained by changing the size of the driving pulleys which, in turn, caused a proportional increase in the speeds of the other parts of the card. The same settings at the card were used throughout the tests. The lap and sliver sizings, general organization, and waste data were

(*Continued on Page 57*)



Photographs of yarn made at the two different speeds in Mill A shows that the higher speed does not hurt the appearance of the yarn. If anything, the yarn made at the higher speed looks cleaner than the other. Photos of yarn from Mill B will be found on Page 57.

Table 1.—Classification of Cotton and Other Mechanical Information

Mill	A		B	
R.P.M. of the cylinder	165 R.P.M.	192 R.P.M.	172 R.P.M.	196 R.P.M.
Staple of cotton	1-1/16″	1-1/16″	1-1/16″	1-1/16″
Grade of cotton	Western Mid.	Western Mid.	2/3 West. Mid. 1/3 West. S.L.M.	2/3 West. Mid. 1/3 West. S.L.M.
Pickers:				
Rear beater	Buckley	Buckley	Buckley	Buckley
Middle beater	2-blade	2-blade	2-blade	2-blade
Front beater	Kirschner	Kirschner	Kirschner	Kirschner
Cards:				
Relative humidity	57%	57%	51%	51%
Stripping schedule	3 per 8 hr.	3 per 8 hr.	3 per 8 hr.	3 per 8 hr.
Ounce lap fed	13.50	13.50	14.00	14.00
Grain sliver delivered	49.88	50.71	52.96	53.83
Pounds carded per hour	9.92	11.84	10.20	11.69
Model (year)	1928	1928	1900	1900
Age of clothing	7 yrs.	7 yrs.	5 yrs.	5 yrs.
R.P.M. of doffer	8	9.3	9.6	11
R.P.M. of licker-in	407	475	460	525
Front plate settings:				
Top	.023	.023	.017	.017
Bottom	.023	.023	.022	.022
Drawing:				
Type	regular	regular	regular	regular
Processes	2	2	2	2
R.P.M. of front roll:				
Breaker	319	319	290	290
Finisher	309	309	290	290
Top rolls	cork	cork	metallic	metallic
Roving:				
Processes:	1	1	2	2
Super draft and H. R.	3.00 H.R.	3.00 H.R.	——	——
Slubber H. R.	——	——	.80 H.R.	.80 H.R.
Intermediate H. R.	——	——	2.09 H.R.	2.09 H.R.
Spinning:				
Type	long draft	long draft	long draft	long draft
Top rolls	cork	cork	cork	cork
Doublings	2	2	1	1
Yarn count	31s	31s	30s	30s
R.P.M. of spindle	9,900	9,900	10,200	10,200
R.P.M. of front roll	122	122	136	136
Ring diameter (inches)	1.875	1.875	1.75	1.75

Table 2.—Test Results

Card waste:	Per Cent	Per Cent	Per Cent	Per Cent
Motes and fly	1.056	1.103	1.567	1.580
Cyl. and doffer strips	.905	.710	.888	.684
Flat strips	3.389	3.324	2.507	2.107
Total waste	5.350	5.137	4.962	4.371
Sliver variation:	Per Cent	Per Cent	Per Cent	Per Cent
Avg. max. variation per yd.	10.83	9.88	11.66	10.88
Max. variation in 20 yds.	20.00	21.11	25.55	25.55
	Count	Count	Count	Count
Yarn size (average of 100)	30.86	31.14	31.13	29.56
Strength:	Pounds	Pounds	Pounds	Pounds
Skein (corrected)	54.50	59.29	61.55	64.14
Skein (actual)	54.77	59.02	59.32	65.10
Single strand	.562	.604	.564	.602
Stretch:	Per Cent	Per Cent	Per Cent	Per Cent
In single strand	7.62	7.52	7.79	7.49
Yarn appearance:	Grade	Grade	Grade	Grade
Compared with standards	B—	B+	C+	B+

(Editor's Note: In both of these tests the breaking strength of the yarn increased when the speed of the card was increased, and the appearance of the yarn made at higher card speed was improved over the regular yarn.)

Tests of Cottons Manufactured Under Different Card Speeds

By G. H. Dunlap

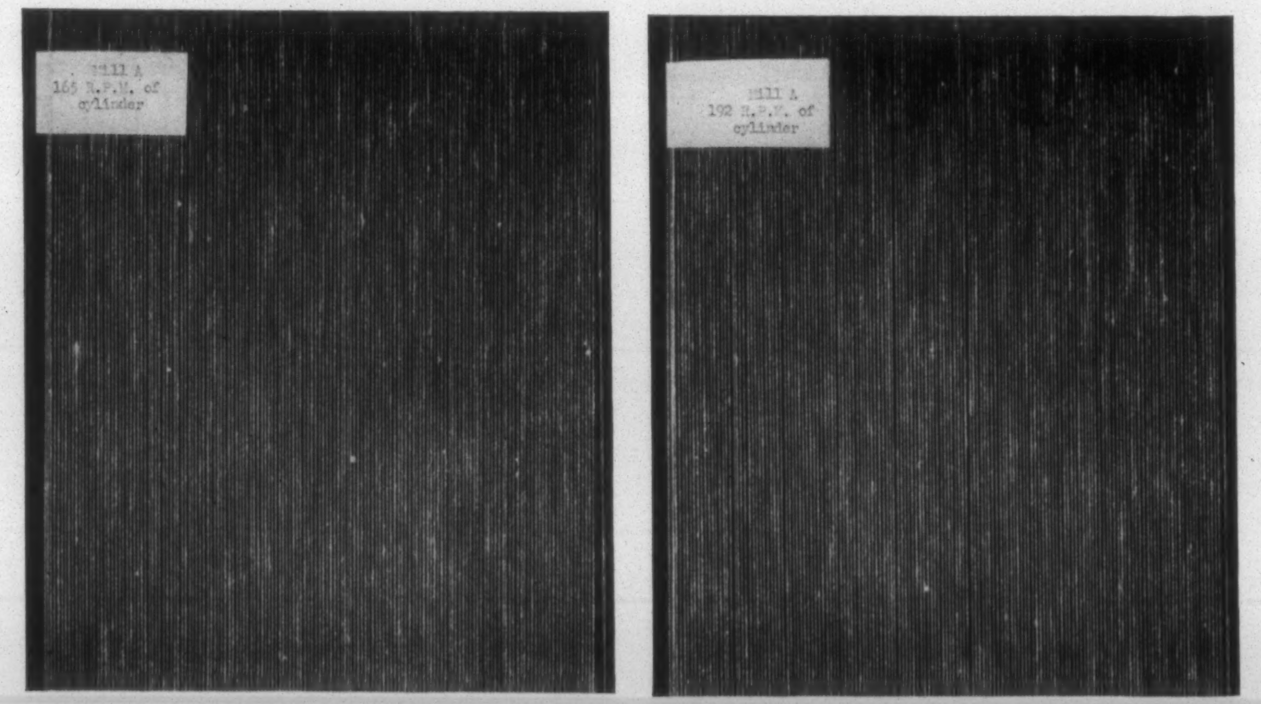
Presented here is the first report of a number of practical mill tests that are being conducted under the supervision of Mr. Dunlap. The research program is under the sponsorship of The Textile Foundation, Southern Textile Association, and The Arkwrights, and is aimed at improving plant operations in the cotton textile industry. Tests are conducted in various mills by the mill's own personnel, under the general supervision of Mr. Dunlap, who in turn correlates the work of the various mills, makes tests in a Government laboratory for results of tests on yarns and cloth. Results of various other tests will be released, through the trade press, from time to time.

UNDER the present emergency, cotton manufacturers have been considering all possible ways and means of increasing production without a sacrifice of quality. One possibility suggested was the speeding up of the cards. In this connection there were two questions to be answered: (1) Can cards be operated efficiently at speeds greater than the commonly accepted maximum of 165 R.P.M.? (2) Can yarn be produced at these increased speeds without sacrifice of quality? In an effort to answer the foregoing questions arrangements were made with fifteen different cotton mills, scattered over the Southern States, to conduct comparative tests on card cylinder speeds.

In view of the considerable interest shown in the project, the following preliminary report, summarizing the results of card speed tests made in two of the fifteen mills, is issued at this time as a matter of information. These data are, of course, only indicative and no conclusions may be drawn until the results of the tests being made in the other thirteen mills are also available for comparison and analysis. Upon completion of the test, the results will be analyzed and published.

In the two tests reported, the increased cylinder speeds were obtained by changing the size of the driving pulleys which, in turn, caused a proportional increase in the speeds of the other parts of the card. The same settings at the card were used throughout the tests. The lap and sliver sizings, general organization, and waste data were

(*Continued on Page 57*)



Photographs of yarn made at the two different speeds in Mill A shows that the higher speed does not hurt the appearance of the yarn. If anything, the yarn made at the higher speed looks cleaner than the other. Photos of yarn from Mill B will be found on Page 57.

Table 1.—Classification of Cotton and Other Mechanical Information

Mill	A		B	
R.P.M. of the cylinder	165 R.P.M.	192 R.P.M.	172 R.P.M.	196 R.P.M.
Staple of cotton	1-1/16"	1-1/16"	1-1/16"	1-1/16"
Grade of cotton	Western Mid.	Western Mid.	2/3 West. Mid. 1/3 West. S.L.M.	2/3 West. Mid. 1/3 West. S.L.M.
Pickers:				
Rear beater	Buckley	Buckley	Buckley	Buckley
Middle beater	2-blade	2-blade	2-blade	2-blade
Front beater	Kirschner	Kirschner	Kirschner	Kirschner
Cards:				
Relative humidity	57%	57%	51%	51%
Stripping schedule:	3 per 8 hr.	3 per 8 hr.	3 per 8 hr.	3 per 8 hr.
Ounce lap fed	13.50	13.50	14.00	14.00
Grain sliver delivered	49.88	50.71	52.96	53.83
Pounds carded per hour	9.92	11.84	10.20	11.69
Model (year)	1928	1928	1900	1900
Age of clothing	7 yrs.	7 yrs.	5 yrs.	5 yrs.
R.P.M. of doffer	8	9.3	9.6	11
R.P.M. of licker-in	407	475	460	525
Front plate settings:				
Top	.023	.023	.017	.017
Bottom	.023	.023	.022	.022
Drawing:				
Type	regular	regular	regular	regular
Processes	2	2	2	2
R.P.M. of front roll:				
Breaker	319	319	290	290
Finisher	309	309	290	290
Top rolls	cork	cork	metallic	metallic
Roving:				
Processes:	1	1	2	2
Super draft and H. R.	3.00 H.R.	3.00 H.R.	———	———
Slubber H. R.	———	———	.80 H.R.	.80 H.R.
Intermediate H. R.	———	———	2.09 H.R.	2.09 H.R.
Spinning:				
Type	long draft	long draft	long draft	long draft
Top rolls	cork	cork	cork	cork
Doublings	2	2	1	1
Yarn count	31s	31s	30s	30s
R.P.M. of spindle	9,900	9,900	10,200	10,200
R.P.M. of front roll	122	122	136	136
Ring diameter (inches)	1.875	1.875	1.75	1.75

Table 2.—Test Results

Card waste:	Per Cent	Per Cent	Per Cent	Per Cent
Motes and fly	1.056	1.103	1.567	1.580
Cyl. and doffer strips	.905	.710	.888	.684
Flat strips	3.389	3.324	2.507	2.107
Total waste	5.350	5.137	4.962	4.371
Sliver variation:	Per Cent	Per Cent	Per Cent	Per Cent
Avg. max. variation per yd.	10.83	9.88	11.66	10.88
Max. variation in 20 yds.	20.00	21.11	25.55	25.55
	Count	Count	Count	Count
Yarn size (average of 100)	30.86	31.14	31.13	29.56
Strength:	Pounds	Pounds	Pounds	Pounds
Skein (corrected)	54.50	59.29	61.55	64.14
Skein (actual)	54.77	59.02	59.32	65.10
Single strand	.562	.604	.564	.602
Stretch:	Per Cent	Per Cent	Per Cent	Per Cent
In single strand	7.62	7.52	7.79	7.49
Yarn appearance:	Grade	Grade	Grade	Grade
Compared with standards	B—	B+	C+	B+

(Editor's Note: In both of these tests the breaking strength of the yarn increased when the speed of the card was increased, and the appearance of the yarn made at higher card speed was improved over the regular yarn.)

Less New Wool, More Low Quality Wool for Civilian Use

THE War Production Board has further restricted civilian use of military-quality new wool for the second quarter of 1942 and at the same time made available for civilian use larger quantities of mohair and lower quality wool not suitable for military fabrics.

This action is in the form of an amendment extension of the wool conservation order (M-73). The original order covered the first 13 weeks of 1942. The extension covers the second 13 weeks, from April 5th to July 4th.

The amendment changes the restrictions on the use of new wool for the second quarter compared with the first quarter as follows:

1. No restrictions are placed on the amount of new wool used for defense orders in the second quarter. The first quarter order permitted a manufacturer to use up to 80 per cent new wool for both defense and civilian orders; unrestricted use for defense orders was permitted only if such manufacturer engaged in no civilian business.

2. On the worsted system the amount of wool permitted for civilian orders is reduced from 50 per cent to 20 per cent of each manufacturer's basic quarterly poundage.

3. On the woolen, cotton and felt systems the amount of new wool permitted for civilian orders is reduced from 40 per cent to 10 per cent of each manufacturer's basic quarterly poundage.

4. For floor coverings, no apparel wool is permitted and the amount of carpet wool is reduced from 50 per cent to 25 per cent of each manufacturer's basic quarterly poundage.

A manufacturer's basic quarterly poundage remains unchanged. It amounts to one-half the pounds of new wool he used during the first half of 1941. Thus, a manufacturer who used 10,000 pounds of new wool during the first two quarters of last year will have a basic quarterly poundage of 5,000 pounds. He will be permitted to use 20 per cent of 5,000 pounds (1,000 pounds) on the worsted system, or 10 per cent of 5,000 pounds (500 pounds) on the worsted system, or 10 per cent (500 pounds) on the woolen system during the second quarter of this year for civilian orders.

Actually, such a manufacturer will be able to use more wool than that for civilian orders, if he takes advantage of another change in the order. To increase the supply of civilian goods and to somewhat offset the reductions of new wool available for civilian purposes, the amended order permits manufacturers to use in place of the wools suitable for military purposes a larger amount of grown mohair (hair from the angora goat) and wool of Grades 44 and lower which are not suitable for military fabrics.

This is done by permitting a manufacturer to use additional amounts of mohair and lower grades wool. For each pound of mohair or low grade wool used on the worsted system, a manufacturer may use an additional two pounds of mohair or low grade wool. For each pound of mohair or low grade wool used on the woolen system, a manufacturer may use an additional five pounds of the same matetrial. Under the order for the present quarter, no distinction is made in a manufacturer's quota between the wools suitable for military fabrics and other wools and mohair.

R. R. Guthrie, Chief of the Textile, Clothing and Leather Goods Branch, said the Far Eastern war situation affects our Australian wool supply and makes it essential to restrict wool for civilian fabrics to a minimum.

It is desirable, he said, to increase the stockpile of war fabrics to make possible quick deliveries of uniforms and to utilize a labor supply in the industry that is now plentiful but which may not remain so.

Mr. Guthrie estimated that the second quarter allocation for civilian use will amount to approximately 22 million pounds of high grade wool with some additional poundage set up as reserve to meet hardship cases, and it is estimated that an equal amount of mohair and low grade wool will be used by manufacturers in taking advantage of the more liberal allowances provided for such wools in the new order. The entire amount for civilian use will total approximately 60 million pounds, which is about the same quantity as is being used this quarter for civilian supply.

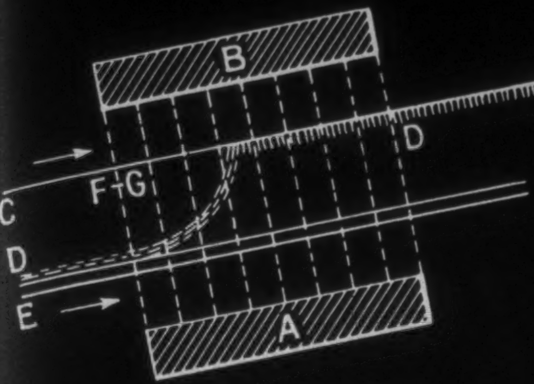
In connection with the issuance of the new wool order, Mr. Guthrie said that mandatory blending of substitute fibers with new wool for civilian use will be provided for in a separate amendment to be issued later, but not to become effective before September 15, 1942.

"Mandatory blending is not being ordered now because sufficient technical data and experience in manipulation is not yet available," Mr. Guthrie said.

"It is felt that any mandatory provisions which might be included at this time would hamper the efforts of individual mills to create the most satisfactory fabrics for varying purposes and with varying types of equipment.

"A separate order will subsequently be issued, to apply to fabrics delivered by the mills after September 15th based upon a careful evaluation of the experience of all the mills in the industry up to that time and the programs which will be developed out of that experience.

"To this end all the mills will be requested to submit programs for the manipulation of wool in the third quarter as soon as possible and not later than April 30th to the Wool Section, War Production Board. Detailed instructions for submitting these programs will be issued shortly."



KEY TO DIAGRAM

The backing fabric, *C*, coated on the face with a suitable adhesive, passes between the negative electrode, *A*, and the positive electrode, *B*. The cut fibers, *D*, are carried on the conveyor belt, *E*. Entering the electrostatic field between the two electrodes, the cut fibers first rise and stand on end with their long axes parallel to the lines of electrical force *F-G*, and then are propelled at high speed toward the positive electrode.

Will Pile Fabrics be Made *ELECTROSTATICALLY?*

Will the flying shuttle be replaced by flying fibers electrostatically deposited on the fabric and imbedded, end on end, 300,000 to a square inch?

None can foretell what invention will do to age-old weaving techniques or how chemical research will change synthetic fibers. But one thing you can be sure—before you are asked to dye these strange new fabrics, National Technical Service will be ready with the formulas that give you the required fastness standards.

Now—as ever—feel free to make full use of nearby National Technical Service.

(Electrostatic Deposition processes are covered by U. S. Patents and Patents Pending.)

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BRANCHES AND DISTRIBUTORS THROUGHOUT THE WORLD

Analysis of Textile Research

(Reprinted from the March issue of *Textile Research,* official publication of Textile Research Institute, Inc., and the Textile Foundation.)

A BRIEF SURVEY of textile journals during the early 1920's discloses articles with the following titles: "Research in the Textile Industry," "Fundamental Research in the Cotton Industry," and "Starting Textile Research." If textile research has been discussed for over 20 years, there must be reasons why it has not been undertaken and why its results have not taken the industry out of the doldrums.

Some of the reasons are the following: The cotton textile industry is composed of many small units with relatively small capital. These mills make a highly competitive product. New yarns, fabrics, or designs obtain little or no patent protection and are easily copied. Each manufacturer has about the same equipment and processes. One mill does not have the money to spend to solve its problems for the benefit of the entire industry. No textile company is self sufficient enough to support a staff to design and make its own equipment. The textile industry is not organized to hold its best research workers.

Fundamental research is, for these reasons, too great an undertaking for most mills; and individual plant research should be considered as a combination of elementary research, production and industrial engineering, mill testing, and the development of controls for manufacture. For a cotton manufacturing company, research seems to fall into the following sub-divisions: (1) raw cotton, (2) manufacture, (3) labor, (4) new products and new uses, (5) sales and distribution.

The potential savings from research on raw cotton requirements may be great in some instances, but probably never would amount to more than 5 per cent of the raw cotton cost.

Research in manufacture may reduce costs somewhat by rearrangement of the processes and machinery in the plant, by increasing the package size of material in process, by rearrangement of drafts, etc., and by keeping the management informed as to what new equipment to purchase. Co-operative testing with the machine builders may lead to considerable savings in manufacture, but the mill has no way of protecting improvements which it finds.

At present there seems to be a great need for definite knowledge concerning fatigue in workers and to learn what mathematical allowances are required in job layouts because of machine interference and spasmodic labor loads due to irregular cycles in operation.

New products and new uses for cotton goods have been studied for many years by Government and private agencies and the results at times have been very profitable. A manufacturer has a certain amount of latitude in varying such factors as yarn size, twist, and ends per inch in cloth in order to give his selling force talking points. However, he may gain but a temporary advantage over his competitors.

Many progressive mills have already entered the field of research in sales and distribution. Since the selling price of most textiles is set on the open market and the volume of production is definitely restricted by 24-hour operation, there are limits to the possibilities of this type of research.

The discussion of fundamental research to aid the industry now arises, and with it several pertinent questions appear: (1) What are the chances of the industry being superseded before research can accomplish anything? (2) Has the industry reached such a stage of development that no further progress can be expected? (3) What can research accomplish for the industry? (4) Who can accomplish this research and interpret the results?

The chances of the cotton textile industry being superseded before research can accomplish anything seem negligible. For one reason, the uses of yarns and cloths seem too closely interwoven with the customs and habits of the human race to consider their being completely discarded in anything but a long period of time even if adequate substitutes should be found.

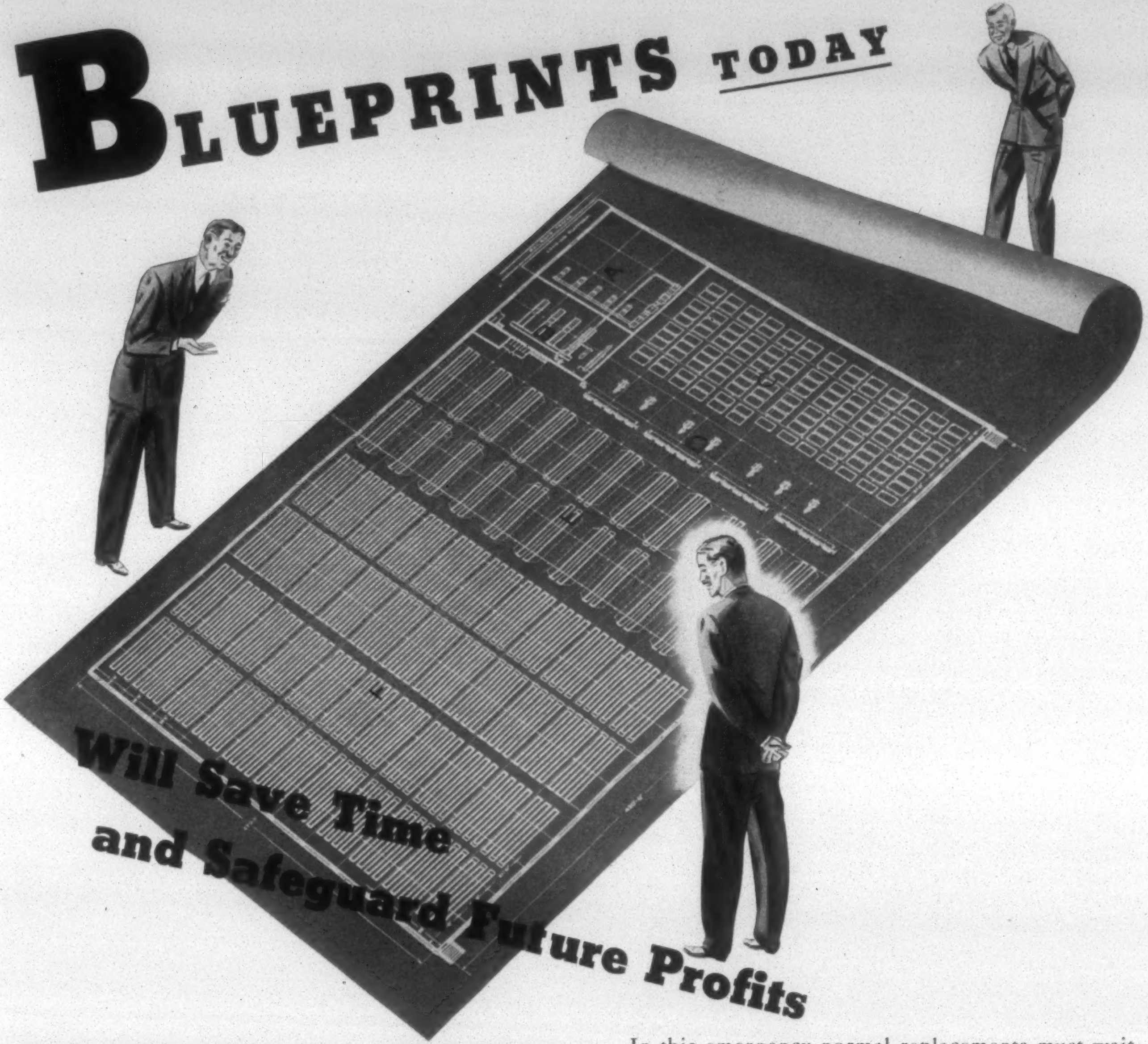
The opening and picking operations are fundamentally the same as they were 100 years ago. The cards used, except for sturdier construction, are practically the same as they were 50 years ago. The flyers on roving frames are almost the same as they were 100 years ago. In the last 50 years aerodynamics, electronics, electrical engineering, mathematics, statistics, physics, and chemical engineering are a few sciences which have made great progress. Application of these sciences to limitations found 100 years ago offers a fertile field for research investigation.

Elimination of any of the bottlenecks of progress will aid not only cotton textiles, but also the machinery builders, who will probably be the first to profit by textile research. If, for example, research can develop a loom which will operate at 800 picks a minute and can be manufactured and sold at a reasonable price, all existing looms will be obsolete.

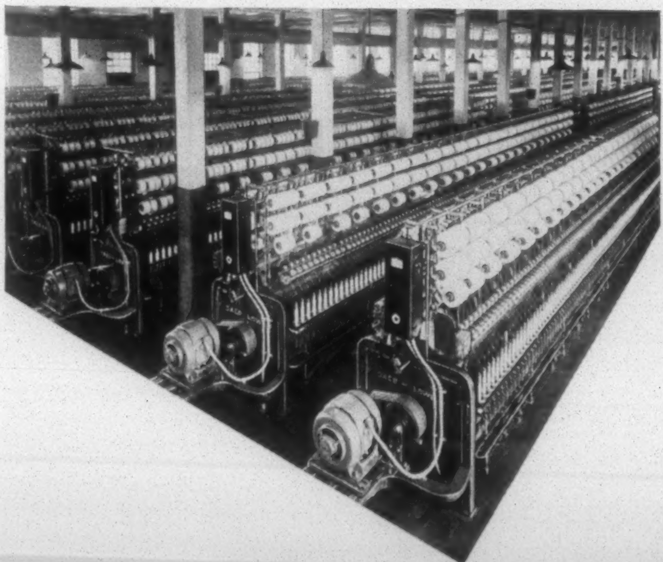
Basic knowledge of fiber properties may furnish a means for radically changing the whole process of carding through a different type of equipment which consolidates several existing processes. Knowledge of the electrical properties of the fibers may lead to greater speeds in drafting and stronger yarns. Knowledge of the effects of

(*Continued on Page 53*)

BLUEPRINTS TODAY



Will Save Time and Safeguard Future Profits



In this emergency normal replacements must wait . . . but the preliminary studies, plans and specifications for new and better equipment which will be urgently needed later should be started without delay. It is not too soon to "blueprint" your future requirements and to prepare for improvements which will be essential to your security with the return of a revived competitive market. Farsighted planning to replace equipment which has become inefficient and costly to operate and maintain will save valuable time and safeguard future profits.

Our engineers are anxious to keep you in close touch with improvements in methods and equipment . . . and to show you how these new developments can be incorporated in your plans for the future.

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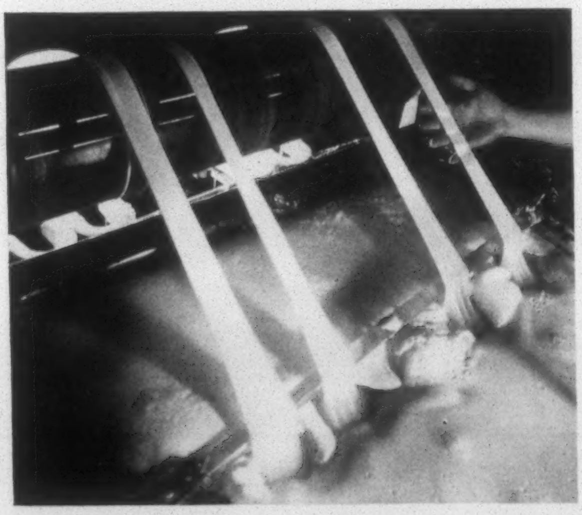
Aralac—Fiber from Skim Milk

Aralac, the comparatively new textile fiber made from skim milk (casein), is being spun in some cotton mills in the South. An extremely soft feeling fiber, it is now being used largely to blend with other fibers. We present here excerpts from a recent address by F. C. Atwood, vice-president, Aralac, Inc., before a meeting of the American Association of Textile Technologists.

FABRICS play such a large part in every-day life and are so close to everybody both literally and figuratively that the results of your planning may have a great deal to do with civilian morale throughout the country in the coming period. The past few decades have seen a constantly growing consciousness on the part of engineers and technologists that no matter how practical and utilitarian a product may be, yet its utility is immensely enhanced by the addition of style to fabric, construction, design and color. We have learned how important color styling is both to happiness in one's surroundings and even to efficiency of production in one's factories.

Frequently I hear the product with whose development I have been associated myself, Aralac, referred to as a wool substitute. If that were true, I would have no occasion to be here, nor would you care to waste much time in listening to any discussion of Aralac. It is not so long past since some of you have recovered from the troubles and problems occasioned by the years when rayon was called artificial silk. Certainly, none of us have any desire to repeat that episode by characterizing a new protein-base fibre as a wool substitute. If such a fibre cannot offer anything new, unique, and useful with merits of its own, so that it can gain a place for itself in your industry then we should waste little time in discussing it.

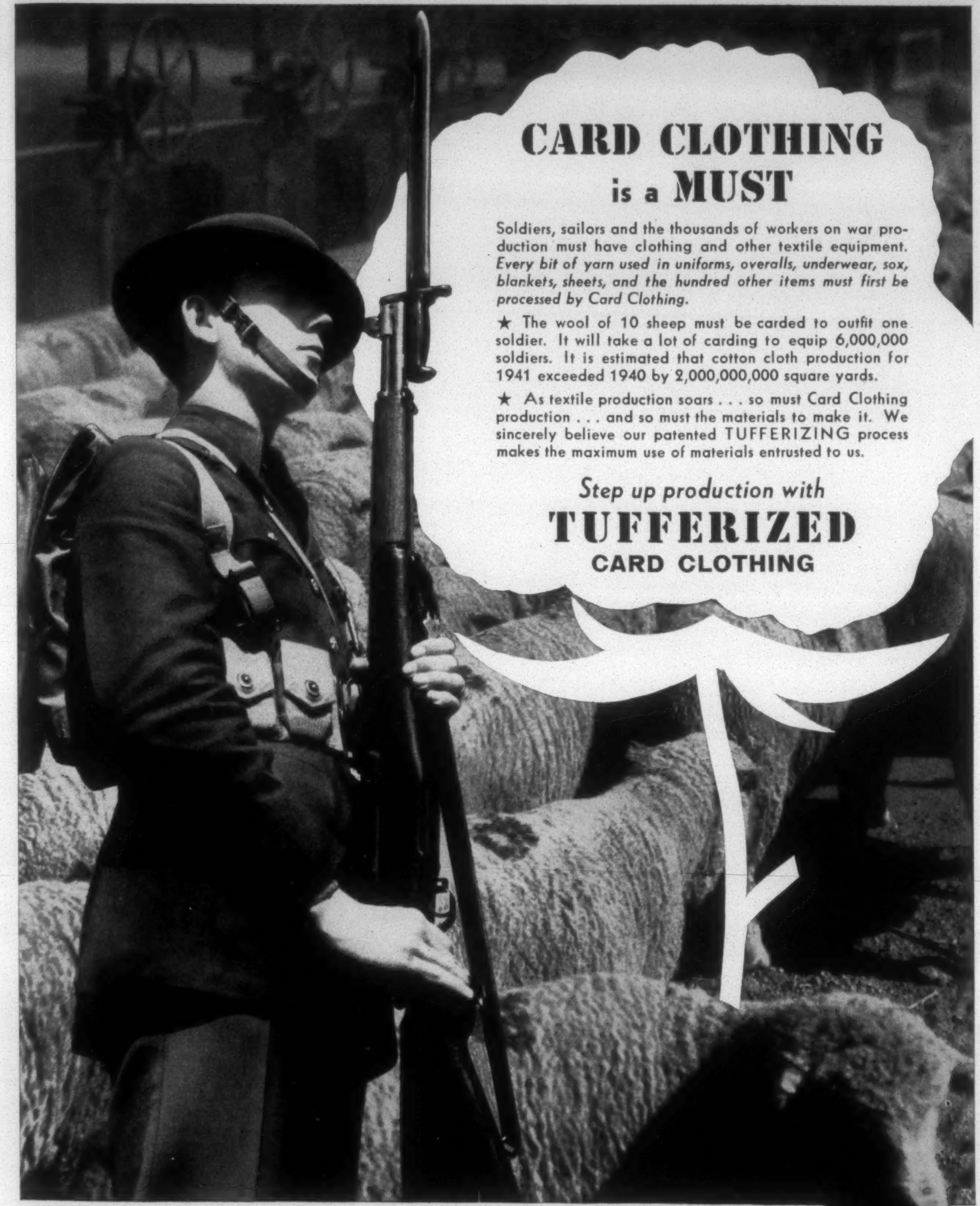


The foamy mass conceals four spinnerets in the spinning box. This is an unretouched photograph of an actual operation in making "Aralac" fibre. In those four "tapes" are thousands of strands of fibre. The hand at the right indicates translucency and relative size.

Finished fluffy "Aralac" fibre, ready to be pressed into 450-pound bales. It is used in Canada and South America as well as the United States.

In the case of a man-made protein-base fibre, a little knowledge is just as dangerous as it is in any other field of human activity. You require and you are entitled to every bit of information and technical fact that is now available to you to help make these decisions which the public expect of you. The collection, evaluation, and use of such information is part of your job. Speculation and guess work are out. On your part you should have no preconceived ideas of what a new material may do simply because you have a vague idea of the properties of one of the raw materials which goes into its make-up. You never know whether you are going to get certain vegetable oils in soap or in salads, in textile lubricating oils or in mayonnaise. You could not tell from your knowledge of phenol whether it is going to be an antiseptic for dressing a wound, whether it is going to be a beautiful piece of

(*Continued on Page 54*)



CARD CLOTHING is a MUST

Soldiers, sailors and the thousands of workers on war production must have clothing and other textile equipment. *Every bit of yarn used in uniforms, overalls, underwear, sox, blankets, sheets, and the hundred other items must first be processed by Card Clothing.*

★ The wool of 10 sheep must be carded to outfit one soldier. It will take a lot of carding to equip 6,000,000 soldiers. It is estimated that cotton cloth production for 1941 exceeded 1940 by 2,000,000,000 square yards.

★ As textile production soars . . . so must Card Clothing production . . . and so must the materials to make it. We sincerely believe our patented TUFFERIZING process makes the maximum use of materials entrusted to us.

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Murchison Says Cotton Textiles May Be Allocated by Government

IN order to achieve an equitable distribution of civilian necessities, the Government may eventually resort to the allocation of cotton textiles for consumer purposes, Dr. C. T. Murchison, president of the Cotton-Textile Institute, told a special meeting of the Cotton Consumption Council at New Orleans March 11th.

The cotton textile industry is now operating at the highest rate in its history and will probably turn out the astonishing total of more than twelve and one-half billion yards this year. Notwithstanding, purchases of cotton goods for war and other necessities are so heavy that civilian supplies are bound to dwindle, the speaker stated. He said that at the present time about half of the production of the industry was being used for the prosecution of the war and that many large mills in the last few weeks have reported that more than 80 per cent of the orders on their books are covered by priority ratings. These ratings are not granted to manufacturers of civilian apparel and home furnishings.

He cited the recent order allocating the production of duck as an example of what can be expected in other cotton textiles. Under this order, a large percentage of the output of duck is reserved for military requirements while the remainder is allotted to civilian users. He predicted that the Government shortly would issue "certificates of necessity" to converters, garment manufacturers and other users of cotton with which they will be able to purchase a certain percentage of the goods they buy during a normal period. In other words, a regular user will be allowed to purchase 50 per cent of his normal requirements of one type of cloth, 30 per cent of another and still 70 per cent of another, the percentage to be determined largely by the extent of the inroads made upon supplies of various types of cloths by military necessities.

The demands being made upon the industry for essential war supplies are already enormous and will double or treble over the next few months. In addition to supplying the army, navy and air forces, the industry, he said, is already up against the problem of making up the deficit in the supply of products made from silk, flax, jute and to some extent, wool. He said that well over a billion yards of cotton bagging would have to be made just to pack agricultural products and make up for the lack of burlap which is imported from India and is likely to be even scarcer than it is now. Staggering quantities of cotton duck (tentage) have been ordered by the army together with record-breaking amounts of uniform fabrics and the various cotton items that go into the manufacture of mechanized equipment.

Faced with these exactions, the industry may find it difficult to maintain the flow of supplies for civilian purposes with the result that the Government will increasingly resort to allocation. He explained, however, that it was highly unlikely that the nation would ever be forced to adopt the painful rationing of textiles so general overseas.

Dr. Murchison described the work being done aimed at keeping upward the basic domestic trend in the consumption of cotton in years to come and announced that the co-ordination of the various research activities of the industry would be extended in the near future.

Taking up the subject of cotton supplies, the speaker stated: "The shortages that have developed in insecticides and fertilizers as a result of the diversion of chemicals into war industries and the scarcity of farm labor appear to point to a reduction in the production of cotton. Make no mistake about it—a substantial cut in the supplies of cotton that should be made available to mills before the year is out would be nothing short of calamious. Cotton is the one fiber in which we pride ourselves in being self-sufficient and the nation is probably more dependent upon it now than at any time in its history.

"Mills are consuming fiber at an unheard of rate and must be assured adequate supplies if the necessitous requirements of our military establishment and civilian population are to be met. In addition, deficits in the supply of jute, flax, silk and wool must be repaired by the one fiber for which we have the land and the skill to grow. In this connection, I am certain that we all approve the statement of Secretary of Agriculture Wickard calling upon farmers to plant their full acreage allotment of 27,400,000 acres and recommending that as much of this area as possible be planted to medium and long staples in order to assure adequate supplies of the qualities we need for war."

The meeting was largely attended and was devoted for the most part to a discussion of the cotton problem. Among those who took an active part in the discussion were Senator Norris C. Williamson, president, Cotton Cooperative Association, Lake Providence, La.; C. G. Henry, general manager, Mid-South Cotton Association, Memphis, Tenn.; Robert Howse, president, Wholesale Dry Goods Institute and president of Johnston & Lariner Dry Goods Co., of Wichita, Kan.

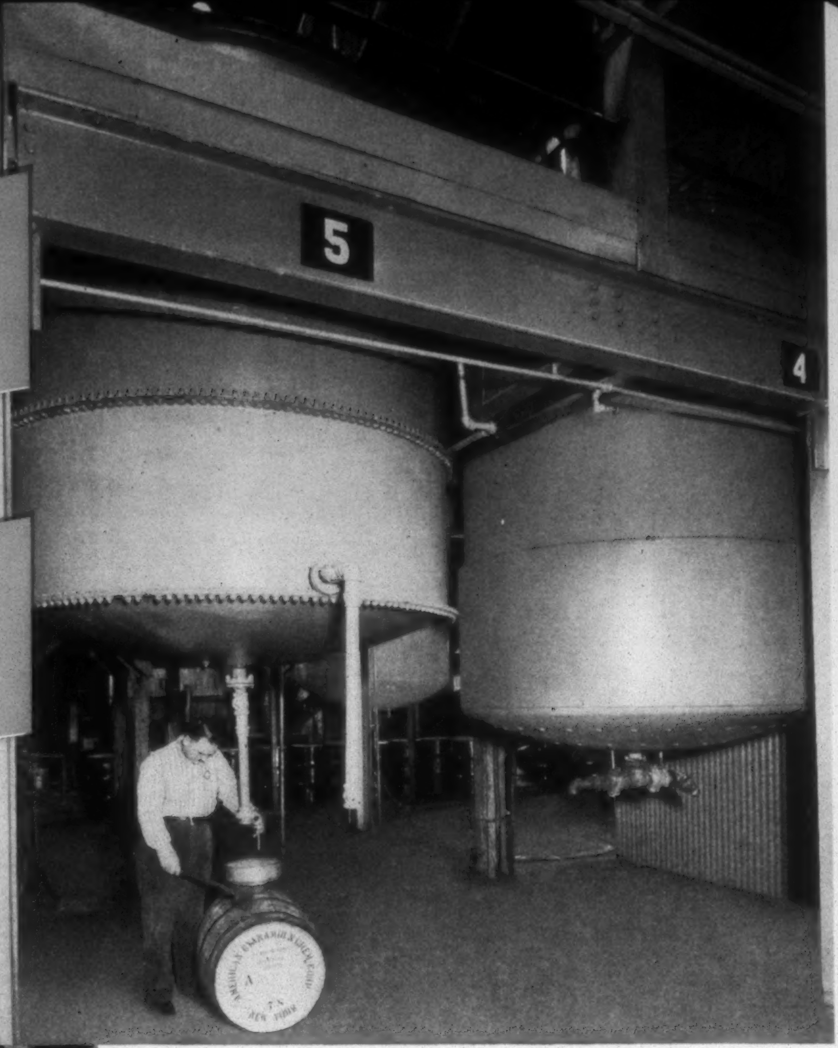
The practical advantages of

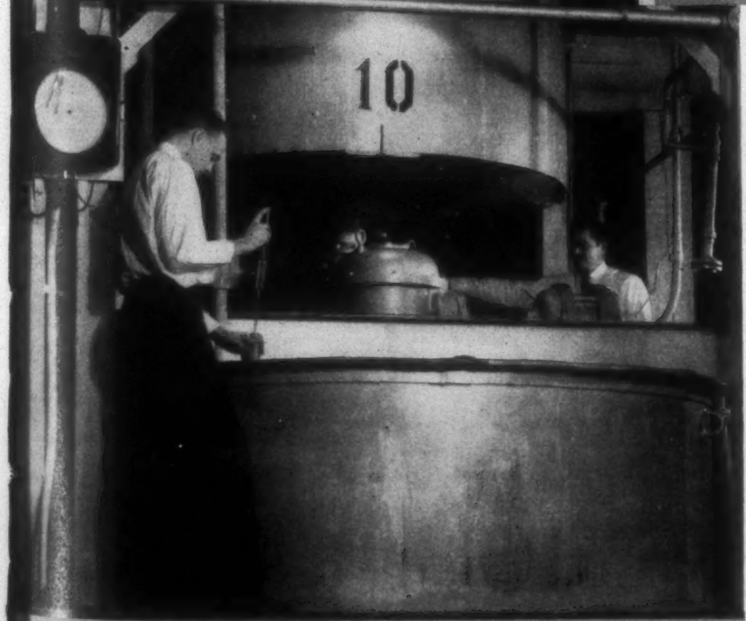
LARGE-SCALE PRODUCTION

to users of

CYANAMID QUALITY CHEMICALS

in the textile industry





(above) One of Cyanamid's modern large-capacity units for the production of textile chemicals. Large-scale production means greatest possible uniformity in chemical supply.

(left) A similar unit in another Cyanamid plant. Each step in Cyanamid's volume production methods is planned and carried out to deliver highest quality as well.

REGARDLESS of whether the volume required is moderate or in carload lots, chemicals for the textile manufacturing processes should be of a consistently reliable, uniform quality at all times.

The source of supply of textile chemicals . . . the sulphonated oils, penetrants, sizing compounds, wetting agents and other specialties . . . therefore becomes a primary consideration to the manufacturer in establishing economically dependable processing results.

Cyanamid recognizes this vital part played by chemicals throughout the textile industry. Cyanamid is also aware that the supplies required by the textile industry can best be provided by high-standard volume production, insuring the barrel by barrel uniformity made possible by large batch manufacture. As a result, Cyanamid has set up modern large-scale facilities adjacent to the important centers of textile manufacture.

Cyanamid today is able to assure textile manufacturers that their requirements, both large and small, will be accurately and quickly filled with chemicals of a consistently high quality.

Cyanamid is also prepared to serve textile manufacturers on problems relating to the proper selection of chemicals to meet changing specifications in production . . . a valuable extra service without charge or obligation that is backed by extensive research and practical field experience.

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*REG. U. S. PAT. OFF.

Reminiscences of

YE OLDE COTTON FACTORY

By
I. K. EDWARDS
Part Two

IT WAS at about this time that the metallic revolving top flat card was introduced which is still in action after being very extensively improved upon. Also the railway head soon went into the discard. The duties of the tenders of these machines were similar to those of drawing.

Drawing frames were operated somewhat the same as today, though the evolution of the machine has been such as to enable the tender to care for many more machines and with less effort, and also turn out a much better grade of product.

Slubbers were operated by grown-ups in most cases who usually did all the tasks required except the fixing, though spare hands were used for short periods when circumstances demanded.

The fundamental principles governing the operation of the machine such as tension, bobbin-building, lay, etc., have maintained their value, though a number of mechanical improvements have appeared, so, instead of the manual labor for every performance we now enjoy the benefit of modern improvement that permit us to accomplish results surpassing our "wildest dreams."

This fact applies, of course, to the entire "flyer frame family."

Notwithstanding that we were at the mercy of weather conditions and were obliged to endure to a great extent the cold or hot, wet or dry days, we did produce some good roving, for the efficiency of the operative is very little, if any, higher nowadays. We were required to make good work as well as a sufficient quantity for the next process, for it was considered a very serious matter for any part of the mill to wait for stock or to be imposed upon by imperfect material, and so, bad roving such as "singlings," doublings and tangled or soiled bobbins were indeed very objectionable features in the organization.

Spinning machinery was of the "mule" and "ring frame" type, the mule being used for the finer and soft twist yarns. The ring spinning frame was eventually adopted for general use. One of the principal reasons for that was the ease with which it could be operated so that the tendency to use young girls and boys in this department soon became a general custom. The "spinners" and "doffers" were mostly girls and boys in the adolescent stage and they made "good" in every particular.

The fact that the mills of that period were not equipped with automatic appliances—air and temperature control, humidifiers, speed controls, etc.—made the tasks of all the people who worked in our mills rather strenuous, especially so, since the working hours ranged from 66 to 72 hours each week.

Following the spinning room was the "spooler" where stock was prepared for the twister or warper. In a yarn mill the twister was used to make ply yarns to ship to customers. In a cloth mill the yarn from the spooler was warped and prepared for the loom. Very little cloth was made, so we used the greater portion of our facilities for making yarns for the trade. Our cloth output was limited to sheeting, stripes, checks, etc., with very limited range of colored fabrics.

Looms were so constructed as to require all performances by hand so that a weaver only tended a maximum of 8 to 10 looms. Most of our cloth was shipped to distant finishing plants for finishing.

The personnel of our pioneer textile industry was almost entirely of native Southern people which fact sufficiently explains the almost miraculous achievements of these fifty-odd years which, if fully accounted for, would fill several good sized volumes.

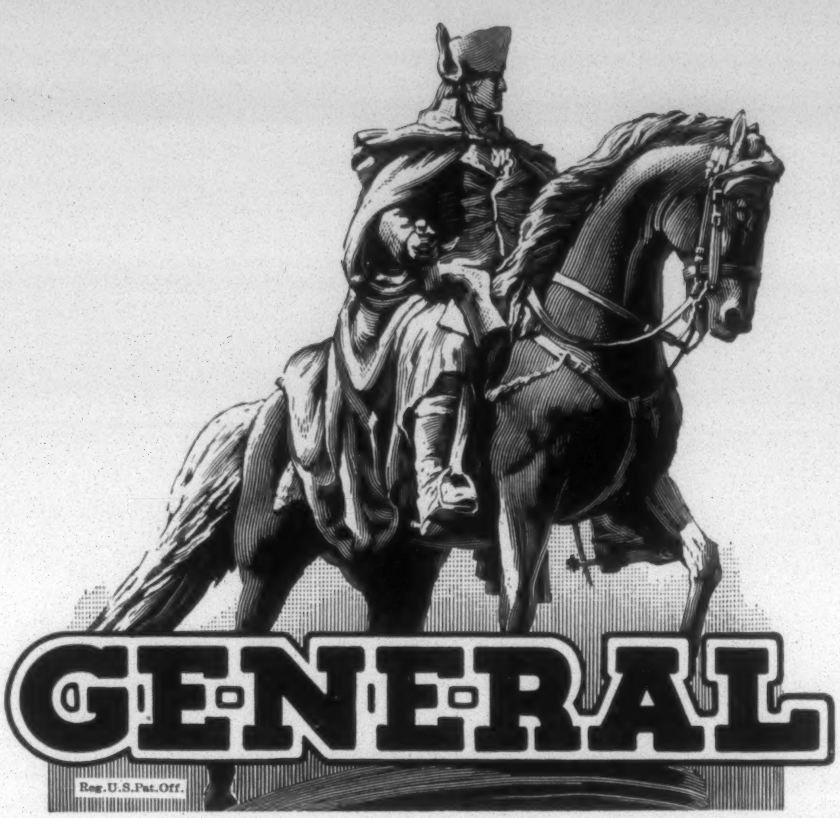
The mill village was a very essential part of the organization as in many cases it is today. Almost everybody attended the Sunday school and church services and many were the homes where devotional exercises were an essential part of the daily program. Amusements and social activities consisted of seasonal out and indoor games, community singings, candy pullings, cake walks, etc., with an occasional dance with music by the "old reliable" fiddle and banjo orchestra, sleighing and skating and various other forms of pastimes as appealed to the different communities.

And so, we managed to spend the small amount of leisure time afforded us in a way that enabled our foreparents to develop a generation of girls and boys into men and women who have laid the foundation for the present high standards of efficiency that merits the recognition of the entire textile world.

With the growing population throughout the Southern States during the late 80's and the early 90's, a very strong tendency toward better living conditions began to manifest itself and creating a rapid increase in demand for many lines of manufactured products so that very soon the foundation was laid for a number of industries to supply this demand.

Naturally, the spinning of yarn and the weaving of cloth played a very important part in this gigantic pro-

(*Continued on Page 62*)



RODA	High grade gas, by-product and steam coal from Wise County, Va., on the Interstate Railroad.
DENDRON	High grade gas, by-product, steam and domestic coal from Wise County, Va., on the Interstate Railroad.
STONEGA	High grade, high volatile steam and by-product coal from Wise County, Va., on the Interstate Railroad.
PREMIX STOKER	A laboratory controlled product blended to meet exacting stoker requirements. From Wise County, Va., on the Interstate Railroad.
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WESTMORELAND COAL COMPANY CRITERION COAL	High grade gas, by-product, steam and domestic coal—Pittsburgh seam from Irwin Basin, Westmoreland County, Pennsylvania, on the Penna. Railroad.
CROZER	Genuine Third Vein Pocahontas from McDowell County, W. Va., on the Norfolk & Western Railroad.
Admiralty Coal	Genuine New River Smokeless, Beckley or Sewall seam from Raleigh County, W. Va., C. & O. and Virginian Railroads.
Old Kentucky	Hazard No. 4 and No. 7 steam and domestic coal from Wiscoal, Knott County, Kentucky, on the L. & N. Railroad.
GENCO	Steam and domestic coals from a number of producing districts.

ANTHRACITE Premium and standard qualities in the entire range of Anthracite burning characteristics.

Capable engineering personnel and the experience gained through long and varied marketing activity assures proper application of one of the above brands and effective servicing of any fuel requirement.

General Coal Company

123 SOUTH BROAD STREET . . . . PHILADELPHIA, PA.

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NEW YORK
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PITTSBURGH

To Receive Bids On 10 Million Woolen Blankets March 26th

Philadelphia.—Informal offers on 10 million olive drab woolen blankets (M-1934) for the Army will be received here March 26th under Circular Neg. No. 262. Delivery f.o.b. cars at place of manufacture is to conform to the following schedule: Two per cent in 30 days; additional 40 per cent in each of the two following 30-day periods; additional 15 per cent in each of the next five 35-day periods and complete in 270 days.

Bidders are asked also to submit bids based on best deliveries they are in position to make, with the proviso that in no event shall delivery extend beyond 270 days. The blankets are to conform to Army Specification 8-111A, Type I, except that they will consist of 100 per cent virgin wool, of which 10 per cent is to be of 56s to 60s grade and 90 per cent of not below 50s grade.

No bids will be considered of blankets to be made from 100 per cent foreign wool. Bidders are allowed to offer blankets of 100 per cent domestic wool and/or 75 per cent domestic and 25 per cent and/or 50 per cent domestic and 50 per cent foreign.

The Working Man Gets the Blame

One of the smoothest tricks employed by the operators of the organized labor racket in this country is the propaganda technique by which the label anti-labor has been applied to every political or civic endeavor aimed at liberation of the working man from the grasp of the unioneer. Not only has this label been invented and widely applied by the labor press to individuals and groups, it has evidently been accepted by the lay press.

Thus, a bill which would compel the professional labor organizer to register his organization and to make public financial statements about the thousands of dollars which workers have been forced to pay to the union becomes labelled as anti-labor. And persons who have opposed such un-American rackets as the initiation fee shakedown and the closed shop—persons who have denounced the sit-down, the lead-pipe violence by which union pickets have pulled strikes, are called "anti-labor."

Persons who have raised their voices against the abuses to which American workingmen—who are, in the aggregate, labor—have been subjected by the little group of professionals who operate and live off the proceeds of the organized labor movement are denounced by the labor propagandists and their vocal labor-politician allies as an enemy of the working man. Nothing could be further from the truth.

The little cell of agitators, radicals and political opportunists who make the biggest noise in half of what they call "labor" is composed almost exclusively of men who have no claim of their own to the title of representative of labor. They are the ruthless exploiters of labor, and measures taken against them in many instances are measures 100 per cent favorable to the cause of the laboring man.

Currently, the campaign is giving patriotic American workingmen a world-wide black eye. It is being widely represented that the strikes, the slow-downs, the carping demands for more and more power for the union closed shop, are the reflection of the attitude of American labor. It is being said that the men in our defense factories prefer to strike at their machines for union security and other trivialities rather than make bombers and guns for the boys on Bataan. It is being said that American labor is demanding closed shop contracts and double time for working on Washington's birthday as a price for doing their jobs and speeding defense production.

We say that such statements are libelous to the American worker, and we say that the men who are purporting to represent these disgraceful exhibitions of treason as coming from American labor are profaning the sacred reputation of the most productive, the most patriotic, the most enterprising and the most responsible people who ever worked the face of this earth.

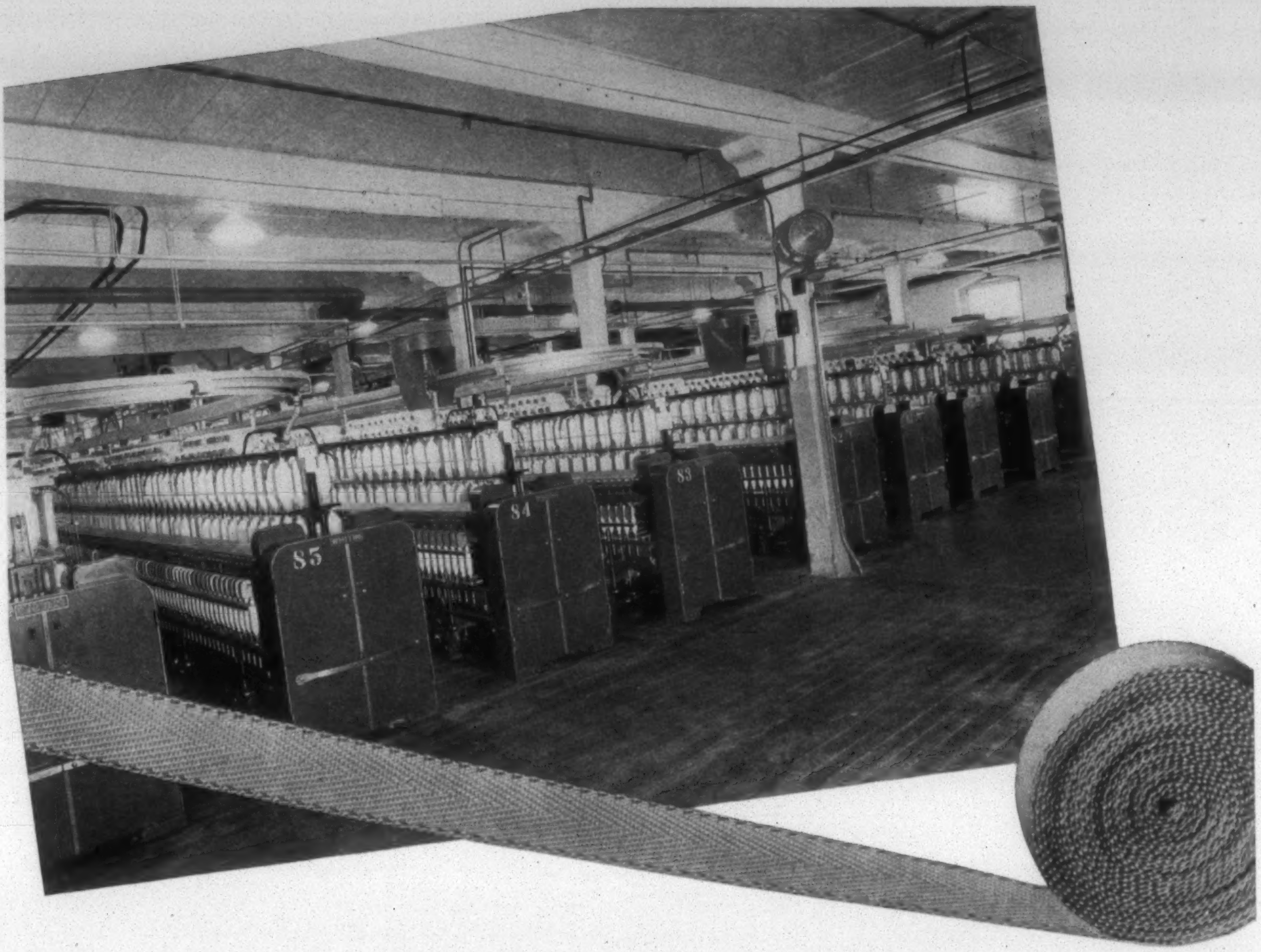
Unfortunately, the Government's labor policy, if so spineless and vacillating a thing can be called a policy, has acted to betray the American worker. The administration has accepted the professional organizers as spokesmen for labor, and has dignified what is no more nor less than a racket with Government sanction. Thus, in the Government's eyes, the only men who speak with validity for the working men and women in Greenville County are Witherspoon Dodge, John Kirby, John Bolt Culbertson and their associates. As a test, go out into the factories and the stores of Greenville County and see for yourself just who it is that these men speak for. Find out who will underwrite the stand that these men have publicly taken.

If we ever thought for a minute that the attitude of American labor is reflected in the record being made by the big unions and their leaders, we would be the first to urge that we give up the war effort and forget Pearl Harbor. On the contrary, we know what the attitude of American labor is. In one Greenville County textile plant, the workers nagged the management for weeks to be allowed to work a full day each week and give the proceeds entirely to the Government, and were only dissuaded from doing so when the Government advised that such contributions were unacceptable to it. Being advised, instead, to buy defense bonds and stamps with their earnings, the employees of that plant—and there are no more than 600 of them—are currently invehting nearly *one thousand dollars a week* in their country's defense effort.

That is a story that will never make the headlines. If it appears at all, it will be a little one-paragraph notice on an inside page. But because some agitator in a defense plant can cause enough dissension to bring a few dozen soreheads out on strike, the whole body of American labor must take the blame for it.

Unless and until the Government of this country is willing to admit that various un-American elements have attached themselves to the organized labor movement, and is willing to see that a purge of these men is made from top to bottom; unless and until the Government follows up the words of the President himself on the un-American closed shop: "The Government of this country will never force the closed shop on anyone;" unless and until it is made clear that the worker who is not a member of a union is just as good and patriotic an American as one who is, the war effort is going to be seriously hampered and the fair name of American labor is going to be profaned.

(*The Observer*)



Why Use More Power Than You Need?

Cutler
SAK TAPE

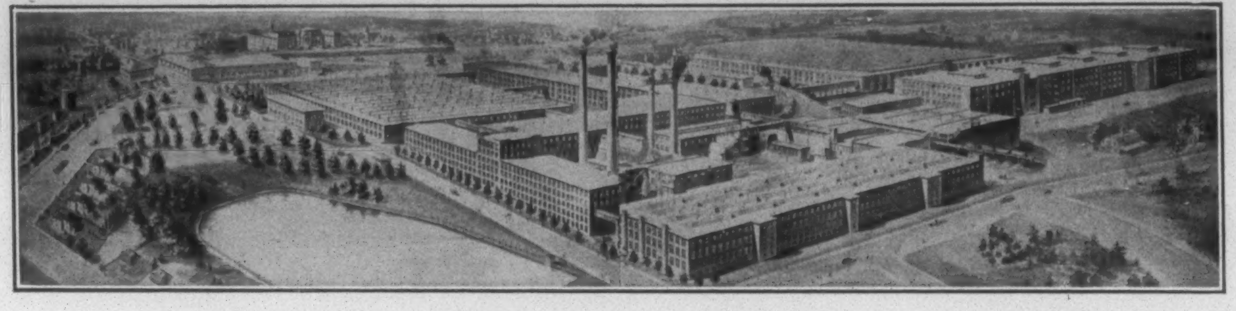
The United States Government has asked the textile industry to conserve power during the present war. CUTLER SAK TAPE is the ORIGINAL POWER-SAVING SPINNING TAPE. Inferior tapes with high-sounding names, produced in imitation of and subsequent to CUTTER TAPE, cannot equal in quality the patented Cutler product.

In war emergency, as in peace, the best is none too good for our country's needs, and the best in spinning tape is CUTLER SAK.

ROGER W. CUTLER

BOSTON, MASS. GREENVILLE, S. C.

Southern Representative
M. BRADFORD HODGES
P. O. BOX 752 ATLANTA, GA.



The History of the Textile Industry In South Carolina

Professor G. H. Dunlap, of the staff of the Textile School of Clemson College, Clemson, S. C., wrote the following historical article for publication in the school's paper. It is an interesting story of the rise of the textile industry in one of the most important textile States in the Nation. Mr. Dunlap is now on leave of absence from the school, conducting research work.

THE history of cotton manufacturing in South Carolina involves a great deal more than is shown by the statistical record of its growth. Progress from the pioneer plants to the present commanding position of the industry cannot be traced by a mere recital of figures. To properly visualize this development, we must take into account the economic conditions prevailing when the first mills were started and the various influences which both aided and checked their growth. The story, too, must contain something of the spirit of reconstruction days—of the vision of the leaders of that period who foresaw that the South could find salvation only in the strength of her own efforts to build again an economic structure that would support her people.

To you who are prone to think of the textile industry in South Carolina as a new enterprise resulting from the effects of the Civil War or to those who hold the popular misconception that the textile industry has been transplanted from a parent New England, the history of the development of textile manufacturing in South Carolina should be most interesting.

Perhaps they are apt to remember the complete and picturesque plantation system that existed in this State, where slaves sometimes made the coarsest cloth for their own clothing, and to forget that in the humble homes a majority of the white population lived many a Silas Marner whose heritage in old England has been the skilled craft of manufacturing yarns and fabrics.

It is admitted on all sides that South Carolina has the distinction of being the pioneer in the development of the textile industry in the Southern States. Historically, we believe that cotton manufacturing on a machine basis in South Carolina began in the year 1790. Yet we have recorded in the records, that Governor Glenn of South Carolina in the year 1748 stated in a required report to the English Lords of Trade that the Carolina colonists were manufacturing cloth goods for home consumption.

It is only just and fair to concede to Slater the distincttion of going into the cotton mill in a business-like manner, but the claim that the first mill was erected at Beverley, Mass., in 1787 is questionable, and the distinction of having the first mill most probably belongs to South Carolina.

In Gregg's "History of the Old Cheraws" the following reference, from a Charles Town Gazette of December 22, 1768, establishing the fact that cotton goods were made in this State as early as 1768.

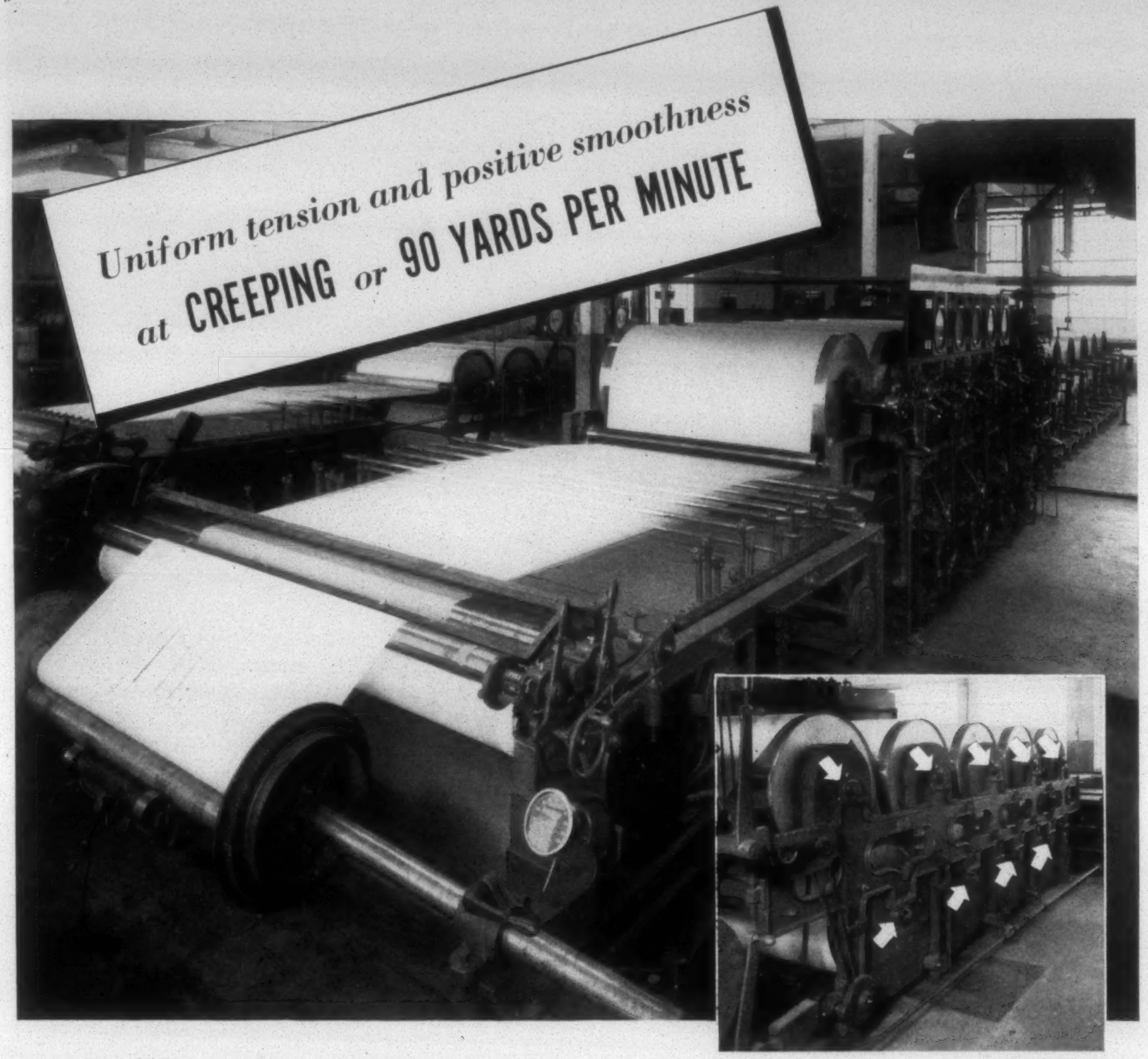
"A gentleman of St. David's Parish, in this province, writes to his correspondent in Charles Town: 'I expect to see our own manufacturers much promoted in this part of the province. I send you some samples of what hath been already done upon this river in the parish. The samples of white cotton was made in proportion of twelve yards to one pound of cotton. Flax, hemp and cotton may be raised here in any quantity. As to wool, one cannot have much of it.'"

We have records of an eighty-four-spindle mill that was situated on the Santee River near Statesburg in Sumter County. It was operated by a small band of English spinners and weavers, and who knows but what the gentleman from St. David's Parish was referring to the small enterprise? It is also stated in the Gazette of March 2, 1769:

"Many of the inhabitants of the northern and eastern parts of the province have this winter clothed themselves in their own manufactures; many more would purchase them if they could be secured."

(*Continued on Page 45*)

Uniform tension and positive smoothness at CREEPING *or* 90 YARDS PER MINUTE



80 Fafnirs play an important part in securing friction-free balance of synchronized motion in new 9-cylinder Cocker High Speed Slasher.

This new Cocker Slasher was designed to break production and efficiency records! A speed range of 25 to 1 . . . automatically controlled acceleration and deceleration permitting speed changes without run-over on beams or strain on yarn . . . heavy vibration eliminating frames . . . patented automatic friction control . . . fingertip tension control . . . and many other outstanding mechanical improvements make it one of the most important pieces of textile equipment developed in recent years.

Altogether, 80 Fafnir high quality ball bearings have been used in the Cocker Slasher. The wide variety of Fafnir Textile Bearings made it possible to meet every requirement of good engineering and resulted in greater economy for the manufacturer.

With machinery makers, mill operating and maintenance men, you'll find that Fafnirs are selected for greater economy and efficiency. Fafnir's Balanced Design – larger balls and deeper races – mean greater load capacity and longer bearing life. For almost every spot on every piece of textile machinery, there is a standard or specialized Fafnir Ball Bearing Unit that will save power and cut maintenance. The Fafnir Bearing Company, New Britain, Connecticut. Branch Offices: Atlanta, Birmingham, Boston, Charlotte, Dallas.

FAFNIR
Ball Bearings
THE BALANCED LINE –
MOST COMPLETE IN AMERICA

351,300,000 Yards Cotton Goods To Be Asked By Army

Philadelphia.—It is reported that the Army soon will ask for informal offers on 351,300,000 yards of cotton cloth and betwen 34,552,000 and 53,048,000 yards of mosquito netting. The bid circular will reach the trade in an early mail, it is expected.

Included in the cotton fabrics are water-repellent cloth (either twill or poplin), drill, herringbone twill, uniform cloth (types I to IV twill), canvas padding, albert twill, silesia, etc. Deliveries will extend to the end of 1942, it is understood here.

The mosquito netting will consist o the bobbinette, tricot or notting ham types as follows: 35-inch, 14,952,000 yards and 81-inch, 19,600,000 yards; and/or woven netting (marquisette) as follows: 35-inch, 27,535,200 yards and 47-inch, 25,513,600 yards.

As concerns the cotton cloth, it is understood by the bid circular will provide for the offering alternately of types of cloth varying somewhat from the regular Army standards.

The large invitation covering about 351,300,000 yards will be received at the depot here on March 31st under Neg. 272. The larger items of this will include:

6,000,000 square yards of overcoat lining twill, olive drab;

6,,000,000 square yards of albert twill, olive drab;

5,600,000 yards of 36-inch olive drab silesia;

3,300,000 yards of 35½-inch canvas padding.

40,000,000 yards of unbleached fully shrunk drill, conforming to Specifications 6-247 with Amendment No. 1.

Manufacturers will also have the opportunity of bidding on this quantity of drill, without the amendment applying, under an alternate, and on a substitute type drill on another alternate.

30,000,000 yards of unbleached fully shrunk drill, also 35-inch, conforming to Army Specifications 6-247 with Amendment No. 1, with an alternate covering 30 million yards of the same material but without the amendment applying to specifications.

12,000,000 yards of 35-inch cotton sheeting for mosquito bars.

13,600,000 yards of olive drab water-repellent cotton cloth being outer material for mackinaws.

69,000,000 square yards of khaki twill uniform cloth, Type I or II or IV or V, conforming to Quartermaster Specifications 33A.

69,000,000 yards of 6-ounce khaki twill conforming to Quartermaster Corps Tentative Specifications 95.

2,500,000 square yards of olive drab Type IV uniform twill with water-repellent finish.

60,000,000 yards of 36-inch herringbone twill conforming to Army Specifications 6-261 and Amendment No. 1; also with an alternate on this item for fabric to conform to requirements that are listed in detail in the invitation.

2,800,000 yards of water-repellent finish herringbone twill cloth.

31,500,000 yards of 36-inch olive drab wind-resistant cloth Type 1, is twill and Type II is poplin.

The depot also will receive bids March 31st, on Invitation 274 covering 9 million olive drab barrack bags. Specifications covering O D barrack bags were issued Feb. 27, 1942.

I TOLD YOU TO PUT HALF YOUR PAY INTO A BOND
I THOUGHT YOU SAID A BLONDE

Kenneth H. Barnard To Head Technical Program Committee of AATCC Again This Year

Thomas R. Smith, president of the American Association of Textile Chemists and Colorists, has announced that Kenneth H. Barnard, of Pacific Mills, New York City, has consented to again serve the Association as chairman of the technical program committee for the 1942 annual meeting.

The meeting will be held under the auspices of the Philadelphia Section at a date to be selected during the last three months of 1942 and at either Atlantic City or Philadelphia, probably Atlantic City.

This year technical problems concerning the country's war effort and the intersectional contest consisting of papers presented by the different sections of the Association will feature the program.

Frank S. MacGregor Goes To du Pont R. & H. Department

Frank S. MacGregor, director of the priorities division of E. I. du Pont de Nemours & Co., since June, 1941, has replaced Milton Kutz as assistant general manager of the R. & H. chemicals department.

Mr. Kutz, who has been assistant general manager since 1933, has been away for several months because of illness and on his return will assume his new duties as sales advisor and assistant to the general manager of the R. & H. chemicals department.

A native of Lawrence, Mass., Mr. MacGregor was graduated from Massachusetts Institute of Technology in 1907. He worked as a metallurgist and consulting engineer before joining the du Pont Co. in 1916. He has also served as assistant director of the development department, control manager of the paint department, general manager of the acele department of the former du Pont Rayon Co., and president and general manager of Ducilo S. A. Productora de Rayon in Buenos Aires.

MacIntyre Heads Association of Finishers of Textile Fabrics

W. R. MacIntyre, of Joseph Bancroft & Sons Co., Wilmington, Del., was elected president of the National Association of Finishers of Textile Fabrics at the annual meeting recently.

R. W. Arrington, of Union Bleachery, Greenville, S. C., and L. H. Ballou, of Slaterville Finishing Co., Slatersville, R. I., were elected vice-presidents. Alice C. Moore was named treasurer.

KEEP 'EM RUNNING WITH GENUINE H&B REPAIR PARTS

THE MAINTENANCE and repair of existing equipment in every industry has suddenly become one of the most vital factors in the war production program. This is particularly true of textiles as the requirements of our armed forces call for hundreds of millions of yards of fabric suitable for military purposes.

To meet this call for all-out production it is essential that every machine which is suitable for producing goods required by the military, naval and air forces should be kept in perfect running order. Efficient operation can only be expected when repair parts are used that are accurately machined with special tools to give years of service at the highest productive output.

To the users of our machinery we say—"Keep 'em running with genuine H & B repair parts". This service we believe to be of paramount importance and propose to maintain same to the utmost of our resources.

While a limited amount of new textile machinery will be available to mills operating wholly or nearly so on government contracts through the issuance of priority certificates, deliveries will depend to a great extent upon our being able to promptly obtain iron, steel and other materials necessary for its fabrication.

In addition to our regular products we have been engaged for the past year in the manufacture of munitions and every effort is being made to expand our operations to meet the needs of the hour.

H & B AMERICAN MACHINE CO.
Textile Mill Machinery
PLANT AT PAWTUCKET, R. I.

H&B
TEXTILE MILL MACHINERY

Boston Office, 161 Devonshire St.
Charlotte Office, 1201-3 Johnston Bldg.
Atlanta Office, 815 Citizens & Southern National Bank Bldg.
Export Dept., United States Machinery Co., 115 Broad St., New York, U. S. A.

Mill News

STATESVILLE, N. C.—The Statesville Narrow Fabrics Co. is now in operation. Joe M. Sherrill is manager.

CHARLOTTE, N. C.—C. L. Upchurch & Sons, Inc., have taken space in the Industrial Terminal Building here, at 1009 W. Palmer St., to facilitate deliveries in this section.

PALMETTO, GA.—Robert & Co., architects and engineers, are preparing plans for an addition to the Palmetto Cotton Mills. The proposed project will be a one-story structure, 55 by 152 feet.

BELTON, S. C.—The old Belton Hotel, which has been empty about six years, has been leased for one year by the Belton Mill.

This building has been leased to provide living quarters for an overflow of Belton Mill employees. Twenty-eight rooms are to be made available and they are expected to be ready for occupancy in about three weeks.

LAURINBURG, N. C.—Bagpipe Mills, Inc., of Laurinburg, has received a charter of incorporation to manufacture cotton yarns and fabrics. The authorized capital stock was $100,000 and $300 was listed as subscribed by D. A. Brannon and J. E. McInnis, of Rockingham, and James L. McNair, Jr., of Laurinburg.

NEWTON, N. C.—Herman Sipe, contractor of Conover, was awarded a contract to construct an addition to the Newton Rayon Mill on North College avenue. This annex will be two floors in some sections and only one floor in others.

The local mill is an affiliate of the Burlington Mills Corp.

The new building is being erected on property recently purchased by the rayon firm and on which was located the Newton Implement Co. The structure has been razed, however, and work on the new building has started.

LAFAYETTE, GA.—The old Union Cotton Mill of Lafayette, Ga., which was purchased about four years ago by the Exposition Mills of Atlanta, Ga., and renamed Exposition Mill No. 2, has been sold to S. Leibovitz & Sons, manufacturers of men's and boys' shirts. The mill has about 22,000 spindles and 400 looms. It is equipped to produce print cloths, broadcloths and similar goods of yarns like 30s and 40s.

The mill was kept shut down until November, 1940, when it reopened and has run since.

The explanation in the market for the purchase is that its acquisition is intended to enable the company to produce the kind of cotton goods of which it has been a sizable purchaser. The company is called sufficiently large as a manufacturer of garments to utilize all the piece goods which the mill can produce if it operates on a 24-hour basis.

ROXBORO, N. C.—The Roxboro plant of Collins & Aikman Corp. has made rapid progress in converting its automobile upholstery weaving equipment to production of duck and serge for the Army and soon will have the entire 224 looms engaged in essential war work.

The plant now has 48 looms producing serge and 160 looms are weaving duck. Conversion of the other looms is being accomplished at the rate of two per day. Orders on hand provide for capacity production until mid-summer, and additional orders are being negotiated. First sales of duck were to the Russian Government, the report said.

GASTONIA, N. C.—Charters have been issued to three Gastonia firms, all of which were incorporated by Robert Goldberg, C. C. Armstrong and G. A. Cooper. The charters were issued as follows:

Gastonia Thread Corp., to engage in bleaching and finish thread yarns of all kinds; authorized stock $5,000; subscribed stock $150.

Gastonia Processing Co., for processing cotton yarns; authorized stock $2,500; subscribed stock $75.

Gastonia Mercerizing Co., to manufacture yarns, cloths and all kinds of textile fabrics; authorized stock $5,000; subscribed stock $150.

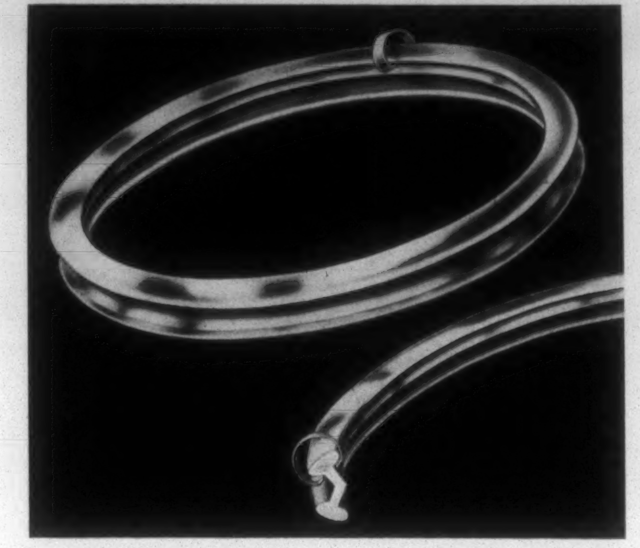
CONCORD, N. C.—At a meeting of the stockholders of the Locke Cotton Mills, held on March 12th, the condition of the company was found to be so satisfactory that it was voted to ask for the discharge of the receiver, John W. Clark, who has been receiver for the past eighteen months, was elected president and treasurer. The other officers elected were: Vice-president, W. H. Belk, Charlotte, N. C.; secretary, J. K. Pittman, Concord, and assistant secretary and assistant treasurer, Thorne Clark, Lincolnton, N. C. The directors elected were John W. Clark, David Clark, Charlotte, N. C.; Thorne Clark, Lincolnton, N. C.; Miss Nancy Clark, Greensboro, N. C.; W. H. Belk, W. H. Belk, Jr., and Hamilton C. Jones, of Charlotte.

LYNCHBURG, VA.—Lynchburg's first blanket factory will be opened in about two months by the American Blanket Co., a branch of the Estmont-Virginia Corp. The local unit will employ about 75, half of them men.

Albert J. Wells, manager of the Lynchburg unit, said several experienced workers will be sent from Waynesboro to train the labor here.

The plant will make an all-cotton product by the pelage process to put a heavy nap on material. Most blankets will be of infant size. All necessary processes will be carried on here.

The building to be used formerly housed the Virginia Textile Corp., a branch of the Dundee Textile Corp., which went out of business a few years ago.



RAGAN RINGS not only increase spindle efficiency but also help to improve yarn quality. These are definite reasons why . . . . ask for the whole story and samples

◆ ◆ ◆

RAGAN RING COMPANY
Box 174, Station A • Atlanta, Georgia

76 *Years of*
STARCH SERVICE

Since 1866 our policy of Fair Service to All has been the bulwark of our business. It has withstood the test of two major wars and several depressions. Today our customers have confidence in our ability to protect their interests . . especially through the present emergency. They have confidence in the high quality of our textile starches . . corn, potato, wheat . . which reflect the craftsman's art in skillfully converting the best materials the world affords. This customer confidence is one of our most valuable assets. We shall do all in our power to preserve and strengthen it.

STEIN, HALL & COMPANY, INC.
285 Madison Ave.
NEW YORK
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CHARLOTTE, N. C.

Certified Climate
A Textile Necessity

MAKES possible a better product, frequently from lower grades of staple. Production is often improved as much as 2½ to 3 per cent. Certified Climate has been known to pay for itself in less than a year.

Parks-Cramer Company
Fitchburg, Mass.
Charlotte, N. C.

Personal News

M. E. Newton is secretary of the Quaker Meadow Mills, Inc., Hildebran, N. C.

J. R. Rice is now general manager of the Randleman Mills, Inc., Randleman, N. C.

C. F. Orr is now general manager of the Waverly Braid Mills, Gastonia, N. C.

F. P. Bodenheimer is now superintendent of the Quaker Meadow Mills, Inc., Hildebran, N. C.

J. W. Bunton is now overseer of weaving at the Gayle Plant of Springs Cotton Mills, Chester, S. C.

W. C. Dobbins, Jr., has resigned as paymaster at the Joanna Textile Mills, Goldville, S. C.

Eric Wall, formerly of Burlington, N. C., is now second hand in twisting and winding, Greenville Spinners, Greenville, S. C.

R. H. Chapman, vice-president of the Inman (S. C.) Mills and the Riverdale Mills, Enoree, S. C., has been elected vice-president of the Spartanburg Country Club.

Lt. Henry Latham, of Chemical Processing Co., Charlotte, N. C., has been ordered to active duty in the Chemical Warfare division of the U. S. Army.

J. E. Duncan is now night superintendent at the Pepperton Cotton Mills, Jackson, Ga. Mr. Duncan was formerly at Thomaston, Ga.

Dave C. Jones, formerly of Woodruff, S. C., has joined the staff of Chemical Processing Co., Charlotte, N. C., as technician and salesman.

W. T. Wood is local superintendent of the nylon manufacturing plant of E. I. du Pont de Nemours & Co., Martinsville, Va.

Glenn R. Hooper is now superintendent of the Freida Mfg. Co., at Crowder's Mountain, near Kings Mountain, N. C.

Charles S. Henerey, president of Santee Mills, Orangeburg, S. C., has been elected president of the Orangeburg Chamber of Commerce.

Ward Bushee, who recently resigned as superintendent of the Adrian and Maodra Mills of the American Yarn & Processing Co., of Mt. Holly, N. C., has become assistant to the president of the Bay State Thread Co., Springfield, Mass.

G. Smith has been promoted from assistant superintendent to superintendent of the Pepperell Mfg Co., Lindale, Ga.

Elmer Torok, for 13 years superintendent of power for the North American Rayon Corp. and American Bemberg Corp., at Elizabethton, Tenn., has resigned.

Mrs. C. W. Mizell is now filling the position of the late C. W. Mizell as president of the Opp Cotton Mills and the Micolas Cotton Mills of Opp, Ala.

J. K. Pittman has been elected secretary of the Locke Cotton Mill, Concord, N. C. He is a graduate of N. C. State College.

S. F. Burtis is superintendent of the nylon throwing plant recently established at Winston-Salem, N. C., by the Duplan Corp.

Allen Sibley, treasurer of the Judson Mills, Greenville, S. C., has been appointed industrial plant protection officer of the Greenville Citizens Defense Corps.

Harry L. Dalton has been elevated to the position of chief of the rayon-nylon division of the War Production Board. Mr. Dalton has been and is a director of the American Viscose Corp.

Luke J. Castile, of Charlotte, Southern sales representative for Keever Starch Co., continues to improve following an operation at the Presbyterian Hospital, and expects to get back to the firing line within a short while.

N. P. Bumgardner, formerly superintendent of the Adrian and Madora Mills, has succeeded the late R. A. Haynie as superintendent of the Superior Yarn Mills, Mt. Holly, N. C.

C. H. Saunders, formerly of Lynchburg, Va., is now superintendent of Newton Rayon Mills, Inc., Newton, N. C., replacing Robert Poovey, who has been called into active service with the U. S. Army.

Falls L. Thomason, Southern agent for N. Y. & N. J. Lubricant Co., has improved sufficiently to be removed to his home, following a serious operation several weeks ago at the Charlotte Memorial Hospital. It will probably be several weeks yet before Mr. Thomason is able to resume his duties with the company.

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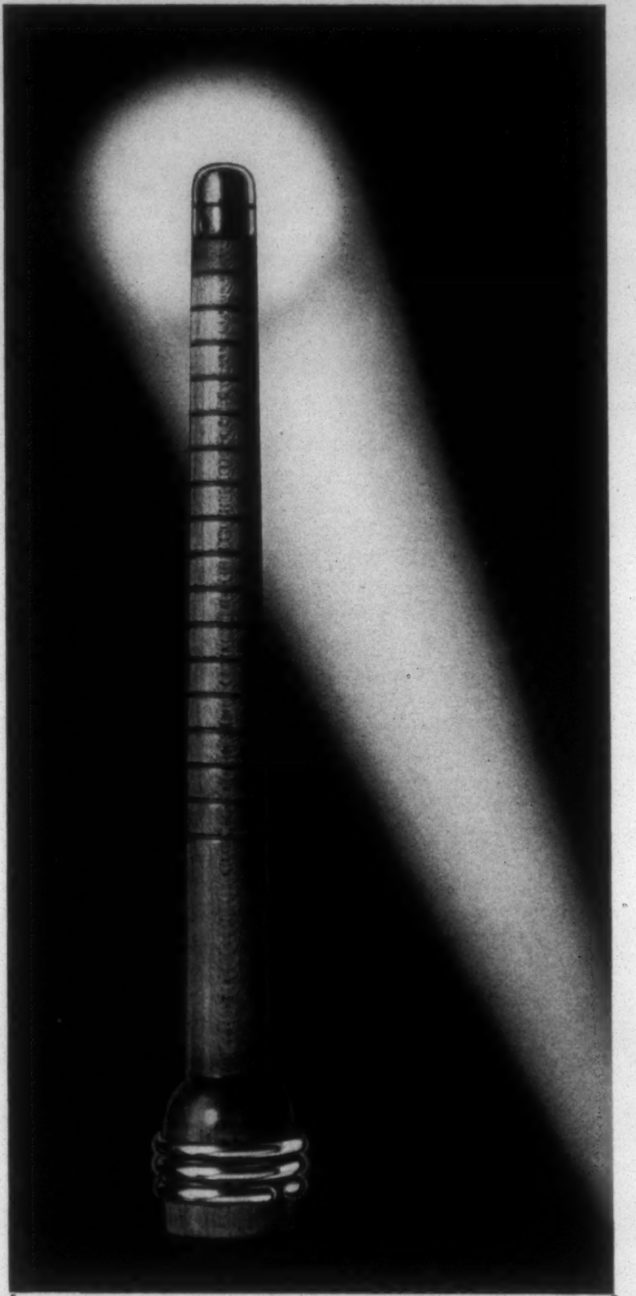

PRECISION BOBBINS

Pick up a handful of broken bobbins on their way to the boiler room and notice how many are split at the tip. Brass tips, carefully fitted, smoothly rolled and punched will largely eliminate this waste. Ask for samples of brass tipped Precision Bobbins.

Precision Bobbins Are Made By

NEW ENGLAND
BOBBIN & SHUTTLE CO.
George M. Hambleton, Gen. Mgr.
NASHUA, NEW HAMPSHIRE

J. H. Yoakum, formerly overseer of weaving at the Dan River Division of Riverside & Dan River Cotton Mills, Schoolfield, Va., is now overseer of weaving at the Granby plant of Pacific Mills, Columbia, S. C.

Houston F. Harris, formerly of the Belmont Plant of Burlington Mills, Burlington, N. C., is now overseer of carding, spinning, twisting and warping, Greenville Spinners, Greenville, S. C.

S. Fuller McLane, sales manager of Southern Loom-Reed Mfg. Co., Inc., Gaffney, S. C., announces that T. D. Hancock, of their sales force, will have eastern North Carolina and Virginia in addition to his present territory.

John W. Clark, who has been receiver for the Locke Cotton Mills, Concord, N. C., has been elected president and treasurer of the company, since it has been taken out of receivership. Mr. Clark is also president and treasurer of the Randolph Mills, Inc., Franklinville, N. C.

Carl A. Rudisill, of Cherryville, N. C., treasurer of the Carlton Yarn Mills, Nuway Spinning Co., and other mills, has announced that he will not be a candidate for the 1943 North Carolina Legislature. Mr. Rudisill represented Gaston County in the 1939 and 1941 Legislature.

Gordon L. Crawford Promoted By Wickwire Spencer Steel Co.

E. C. Bowers, president of the Wickwire Spencer Steel Co., has announced the appointment of Gordon L. Crawford, previously sales manager of the Buffalo district, as assistant general sales manager with headquarters in New York.

Georgia Mill Association Convention May 21-23

Atlanta.—The Cotton Manufacturers' Association of Georgia will hold its annual spring meeting at Sea Island, Cloister Hotel, on May 21st, 22nd and 23rd, according to T. M. Forbes, secretary.

Case of Smallpox in Spartanburg Mill Village

The discovery of a case of smallpox in Glendale Mill village was reported by Dr. O. D. Garvin, director of the Spartanburg (S. C.) Health Department.

Mass vaccinations of residents of the village and the area immediately surrounding it were immediately ordered by the health director as a precautionary measure to prevent any spread of the disease.

Dr. Garvin said a woman textile worker at Glendale was stricken with a malady causing a body rash, and her ailment was definitely diagnosed as smallpox.

The woman had recently moved from Kingsport, Tenn., and it is believed she contracted the disease there. Dr. Garvin said the woman told him that just before leaving Kingsport a fellow worker in a mill there had been afflicted with a rash similar to the one she now has.

As soon as the diagnosis of the case was made, health authorities quarantined the home in which the victim is residing and vaccinated eight residents of the dwelling.

While the Glendale victim will recover, the disease varies with individuals in its severity and might prove fatal in many cases if it spreads, Dr. Garvin said.

He said the case at Glendale was the first case of smallpox reported in South Carolina in several years.

American Cotton Manufacturers' Association Meets in Atlanta May 1-2

The 46th annual convention of the American Cotton Manufacturers' Association will be held in Atlanta at the Atlanta Biltmore Hotel May 1st and 2nd, it was announced recently.

The board of government will hold its regular pre-convention dinner meeting on Thursday evening, April 30th, at 6 o'clock in the private dining room of the Biltmore.

This convention has streamlined its activities to those of the theme of the meeting, "All Out for Victory," according to W. M. McLaurine, secretary and treasurer of the association. W. N. Banks, president, and all of the speakers will build their addresses around this theme. There will be no golf tournament or skeet shoot promoted by the association.

On Friday, May 1st, there will be a morning session, an afternoon session and the banquet session. The banquet will be held in the Al Doonan Hall of the Atlanta Athletic Club. The banquet will be preceded by a reception by the Atlanta Clearing House Association given to the members and guests in honor of the officers of the association and their guests.

On Saturday morning there will be two important addresses, and then will follow the business session of the convention and then adjournment.

This is the first time the association has held its convention in Atlanta since 1932.

McComb Gets Patent On Yarn Marker

A patent has been issued to Geo. B. McCombs, of Magnolia, Miss., for an attachment operating on a slasher an dis known as a Yarn Marker for which purpose it is to automatically stop the loom at the cut mark. A demonstration has been made in the Magnolia Textiles, Inc., of Magnolia, Miss., and has proved most successful.

OBITUARY

MILTON ENSOR

Lincolnton, N. C.—Milton Ensor, prominent Lincolnton citizen since 1908, died at his home here March 2nd after an illness which had its beginning last September.

Mr. Ensor entered the textile business at the age of 21. In 1908 he came to Lincolnton to manage the old Wampum Mills, which position he held until 1917, when he went with the Cherokee Mills in Knoxville, Tenn. He returned to North Carolina in 1920 and after spending several years with the American Processing Co. at Mt. Holly he acquired an interest in the Rhyne-Anderson Mill at Troy and assumed the management of the plant, remaining there for nine years. In 1934, he came back to Lincolnton and since that time had been in the textile machinery business.

Deliveries on Textile Machinery

- **WE KNOW WE CANNOT SHIP** as much textile machinery as our customers want . . . or give them as prompt deliveries on their orders for repairs and parts as they think we should.
- **WE ARE SERVING THE TRADE** today to the best of our ability. Naturally, we are governed by Washington as to the way in which we can serve it best. We feel, however, that in view of the all-out effort needed from the textile industry that it should have full consideration.
- **WE ARE VERY BUSY TODAY** making, in addition to our regular lines of textile machinery, a great many new things which are necessary in the armament program; and much of our tool equipment and a large part of our working force are assigned to this outside work for the duration. Naturally this affects to some extent our ability to produce textile machinery.
- **ALSO, WE ARE IN A WAR ECONOMY** wherein orders bearing priority ratings from the government have first place in our production schedule. We think we can assure the mills, however, that there will be an adequate supply of repairs for maintenance, and we also believe that a substantial amount of textile machinery will be built.
- **HOWEVER,** the principal job for all of us today is to WIN THIS WAR . . . and to win it as quickly as possible. Nothing else is so important. Nothing should be overlooked or neglected that will aid the program and objectives of our government.

TO THAT END WE PLEDGE ALL OUR EFFORTS.

E Kent Swift
President

WHITIN MACHINE WORKS
Whitinsville, Massachusetts, U. S. A.
Charlotte, N. C. Atlanta, Ga.

TEXTILE BULLETIN

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Roosevelt Defends Closed Shop

A wave of resentment against the practices of labor union racketeers has swept this country and senators and congressmen have been thrown into a panic by a flood of angry letters.

The public is not opposed to labor organization, as such, but are incensed by the efforts of the labor leaders to interrupt war production in order to insure larger collections of union dues.

The public, including many farmers who applied for work in connection with the construction of army camps but were required to join a union and to pay from $25 to $100 initiation fees before being allowed to work and determined that labor racketeering shall cease.

The public recognizes the right of a man to join a labor union but is demanding that American citizens have the right to work without paying tribute to anyone.

The present situation has caused Franklin D. Roosevelt to come into the open and admit his advocacy and support of the closed shop.

The great advocate of "freedom" is now in the position of being willing to deny workers the right to choose and enter their places of employment without paying dues to racketeers.

President Roosevelt's unwillingness to take any position, not favored by union leaders, has resulted in far less war goods being produced that would have been produced by free men.

In the face of an almost nation-wide uprising, he stands as a supporter of the un-American closed shop.

Should Declare a Holiday

Senator Maybank, in an address at Raleigh, N. C., called on the American people to "forget petty politics and lend every effort to the creation of a unified country." He urged the administration to declare a "holiday on social and welfare experimentation until the war is ended."

The Washington Row

The textile industry has been much interested in the resignation of Robert R. Guthrie, chairman of the Textiles, Clothing and Leather Division of the War Production Board, and two of his associates.

The industry was much relieved when Mr. Guthrie stated that he had no complaints to make against the textile industry and when he commented favorably upon the work of Thos. H. McKinney, of the combed yarn division, formerly of the American Yarn & Processing Co., Mt. Holly, N. C., and Harry L. Dalton, of the rayon and nylon division, who has been loaned by the Viscose Co.

We knew that Tom McKinney and Harry Dalton were primarily interested in serving their country, but it is gratifying to know that Mr. Guthrie had a high appreciation of their services.

There is, not yet, enough information about the row which preceded the Guthrie resignation upon which to base an expression of opinion, but it does seem that Robt. R. Guthrie took very arbitrary positions and that he did not have the faculty to work in harmony with other men.

Conservation

W. A. McNeace, overseer of weaving at Florence Mills, Greenville, S. C., has written TEXTILE BULLETIN to offer a suggestion for conserving rubber which we feel merits the thoughtful consideration of other mills.

Mr. McNeace states that he is having all old rubberized pickers saved when they are taken off the looms, and also rubbers out of shuttle springs. Should all mills using a similar type of picker follow this example it would undoubtedly result in the salvage of many pounds of rubber within a year.

In this connection, it occurs to us that operating executives in the various departments of the mills may have other worthwhile suggestions for conserving scarce materials, or for saving time and thus increasing production, and if they will pass their ideas along to us we shall be glad to publish them in the interest of the war effort.

General Schikelgruber

General Adolph Schikelgruber does not seem to have been very successful since he fired all the top generals of the German army and personally took charge.

Schikelgruber is the real name of the man who plunged the world into this catastrophic war. Hitler is the name he assumed because Schikelgruber even in Germany caused a smile.

Hitler cannot stand much ridicule and the press of America would do well to always use his real name—Schikelgruber.

Increased Card Speeds

It will be of interest to mill men to study closely the report of tests on increased card speeds on pages 16 and 17 of this issue.

As a result of speeding up the cards, from the overhead pulleys, two plants found, according to the reports, that the yarn looks better and breaks higher and that the production of the cards is increased. Since this is the result of tests in only two mills, it cannot be taken as conclusive, but 13 other mills are now running similar tests and preliminary reports from them agree substantially with the two completed.

This report, based upon tests made in mills, is the first of many to be released to the textile industry under a program of research sponsored by the Textile Foundation, the Southern Textile Association, and The Arkwrights. G. H. Dunlap, of Walhalla, S. C., is supervising the tests, which are made in the mills, with the mills' own personnel, under practical operating conditions. Any mills wishing to conduct tests in this research program may do so by contacting Mr. Dunlap, who will arrange details and supervise the work.

Synthetic Rubber

The following are quotations from the 1942 B. F. Goodich Almanac which was compiled and printed prior to Pearl Harbor:

> During 1941, Uncle Sam has forged ahead rapidly as a leader in the manufacture of *synthetic* (or artificial) rubber—so that life as we know it today could go on if we were cut off from natural rubber sources in the Far East! Germany has been manufacturing synthetic rubber for many uses, including tires, since the middle of the last World War, while in the United States, several such materials have been developed for industrial uses, but have been used in very small quantities.
>
> According to estimates of the United States Department of Commerce, Germany now has a known synthetic rubber capacity of 20,000 tons a year. In 1942, total American production will probably reach 75,000 tons, thanks to the fast work and the application of technical skill by American rubber manufacturers and scientists, and the co-operation of the United States Government.
>
> There are several types of synthetic rubber that are serving America today. But only Ameripol (developed by B. F. Goodrich Co.), to date, has proved its ability to double for natural rubber in American passenger car tires where rubber takes the greatest punishment and meets the world's highest standards of service and performance!
>
> Ameripol is made from an American petroleum product called butadiene and other American materials.

Inflation Gap

An authority estimates that there will be a $20,000,000,000 inflation gap in the United States.

He estimates that individuals in 1942 will have $97,000,000,000 to spend after paying Federal taxes, but that the goods and services which will be available to them will not exceed $70,000,000,000. This indicates that people will have $27,000,000,000 more than they will be able to spend and if they spend $7,000,000,000 on savings bonds and additional taxes there will be $20,000,000,000 running around loose and with no place to go except into higher prices.

The same authority says that in 1943 it will be even worse, as the income of the people will be higher and yet the supply of things which they can buy will be less than in 1942.

Textile Wage Increase

Per Cent Change—July, 1941, from July, 1920

	Employment	Payrolls	Ave. Weekly Earnings	Ave. Hrs. Work Per Week	Ave. Hourly Earnings
	%	%	%	%	%
Cotton Goods	+ 23.9	+ 57.0	+26.6	+11.5	+13.8
Iron and Steel and Products	+ 30.2	+ 59.9	+22.8	+ 7.1	+11.7
Aircraft	+131.4	+190.5	+18.8	+ 6.5	+10.7
Lumber and Products	+ 16.9	+ 41.0	+20.7	+ 7.9	+11.8
Petroleum and Coal Chemical and Products	+ 16.7	+ 31.7	+12.9	+ 3.9	+ 8.1
Leather Products	+ 10.3	+ 35.2	+22.7	+ 9.3	+11.6

The above figures, taken from a recent Survey of Employment and Payrolls conducted by the United States Department of Labor, clearly shows that the cotton textile industry has, in this present emergency, provided its workers with increases in wages, employment and hours worked, in a way which is comparable to the major "defense" industries. Second only to iron and steel and the aviation industry in rise in employment and payrolls, the cotton industry exceeds all these major industries in average weekly and hourly earnings and average hours work per week. It is specially interesting to note in the last column that the actual increase in the hourly wage scale for cotton tetile employees is greater than any of the others shown.

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Just a few cents worth removes the starch from hundreds of yards of cotton and mixed cotton fabrics

Desize with EXSIZE

Exsize is a liquid concentrate of enzymes that removes starch gently and naturally. Because it is fast and thorough in action it reduces the amount of chemicals needed for bleaching and dyeing and permits this reduced quantity to be more efficient.

Exsize contains no chemicals or alkalis to injure the finest fabrics. For further, complete information send for FREE booklet—today!

PABST BREWERIES

Our laboratory facilities and practical field men are available to help you with desizing problems.

PABST SALES COMPANY

CHICAGO, ILLINOIS

•

Warehouses at New York, and Textile Warehouse Co., Greenville, S. C.

McAden Loses $15,000 Suit

Stanley, N. C.—A Mecklenburg (N. C.) jury has decided that R. F. Craig and Hubert Craig of Stanley had not made a binding contract with John Henry McAden of Charlotte in regard to the proposed sale of the Lola Mill at Stanley.

McAden had brought suit against the Craigs for $15,000 alleged damages involved in the deal which failed to materialize. The case was opened before Judge J. Will Pless of Marion, and at the conclusion of the plaintiff's evidence, was non-suited against H. M. Craig.

McAden charged that he had a binding contract with the defendants in regard to the purchase of the cotton mill for $150,000, and that he had a purchaser who had offered him $165,000 for the property. His contention was that the Craigs invalidated the contract, causing him to lose the $15,000 profit.

F. G. Carroll Promoted By Viscose

Furnam G. Carroll, of the sales development department of the American Viscose Corp., has been transferred to the company's Marcus Hook, Pa., plant as manufacturing superintendent, it was announced.

Mr. Carroll attended Clemson College, Clemson, S. C., where he studied mechanical engineering. He was formerly overseer of spinning, winding and dyeing at Judson Mills, Greenville, S. C. Mr. Carroll joined the American Viscose Corp. in January, 1939, and since that time has been the senior man in charge of field work on "Fibro" rayon staple fiber production, particularly in the cotton trade, for the production of the company's plants at Parkersburg and Nitro, W. Va., Front Royal, Va., and Meadville, Pa.

18 Million Undershirts, 19 Million Drawers, Wanted By Army

Philadelphia.—Bids on 37,000,000 cotton undergarments are asked by the local Army Depot to be received March 23rd for complete delivery wtihin 270 days from dates of awards. Undershirts are to be made of carded yarn.

Invitation 256 calls for bids on 18,000,000 summer sleeveless cotton undershirts to conform to specifications dated September 13, 1940, except specifying a good quality carded yarn spun from cotton not lower in grade than middling with staple not less than one inch. There are two items, one calling for flat knit and the other for ribbed, and no bid for less than 100,000 per plant will be considered.

Rate of delivery called for: not less than 2 per cent within 60 days; 3 per cent additional in the next 30 days; 3 per cent more in the next 30 days; 12 per cent more in the next 30 days; 20 per cent additional each 30 days for three periods and for completion in 270 days.

On the same date bids are asked on 19,000,000 cotton drawers (shorts), invitation neg. 258, conforming to specifications dated October 6, 1936, and amended April 23, 1938, with exceptions as listed for thread count of 56 with break of 25 in filling. No bid for less than 50,000 per plant will be considered.

DYEING AND FINISHING

Properties of Chemicals That Make Them Valuable for Textile Processing

By D. P. Quinn

PART VII SILICATES

THE term "Silicates" is used here, as dyers, bleachers and textile chemists commonly refer to these products as such, though in the strict technical definition the products used and of interest for textile processing chiefly are the Sodium Silicates. To the laymen, liquid sodium silicates is commonly called "waterglass" and is widely used in many industries.

Sodium Silicates are the range of chemicals prepared by fusing in a glass furnace varying amounts of selected grades of sand (complex silicate—SiO_2) and soda ash (Na_2CO_3). A glass like substance is produced which will dissolve in water if given a steam treatment before trying to dissolve in water; otherwise it is practically insoluble in even boiling water.

The earlier types of liquid sodium silicates are known technically as colloidal compounds but around the early "thirties" (1928-1934) a crystalline sodium silicate was produced and this product was classified as a sodium meta silicate when introduced to the textile dyers and bleachers. Silicate compounds of interest to textile wet processing are:

Sodium Silicate (liquid)—40° $Na_2Si_4O_9$

Sodium Meta Silicate—Crystalline $Na_2S_1O_3$, $5H_2O$

Sodium Alumino—Silicates (patented type—similar in properties to Sodium Meta Silicate)

Sodium Fluosilicates Na_2SiF_6

Ammonium Fluosilicates $(NH_4)_2SiF_6$

Since the liquid Sodium Silicate and crystalline Sodium Meta Silicate are the two chief silicate compounds used in wet textile processing they will be discussed first. The chemical and physical properties of these compounds show why they are of value for the textile wet processing industry.

A Table Showing pH Value of Various Alkalies Used in Textile Processing

	0.1% Solution	0.2% Solution
Sodium Meta Silicate—Crystalline	10.3	11.8
Sodium Silicate—(liquid)	9.4 to 10.0	10.6 to 11.1
Soda Ash—Crystalline	10.5	10.6
Caustic Soda—Flake	11.6	13.0
Tri Sodium Phosphate—Crystalline	10.7	11.0
Borax	10.6	11.0
Tetra Sodium Pyro Phosphate—Crystalline	9.0	9.5
Tetra Sodium Pyro Phosphate—Anhydrous	9.0	9.5
Sodium Meta Hexa Phosphate—Crystalline	7.5	7.8

This list of alkalies gives the commonly used ones and in many types of processing operations the liquid and meta silicates are used in conjunction with one or more of these products according to the specific job required of the processing bath.

Special Physical and Chemical Properties

The liquid sodium silicates being colloidal in nature possess many valuable physical and chemical properties. It possesses buffering and stabilizing action on a peroxide bleaching bath and permits a slower bleaching action by the gradual release of the oxygen for bleaching action on goods under process. Both the liquid and meta silicates possess high neutralizing action on the fatty acids found in soap solutions and this enables these products, especially the meta silicate, to act as soap builder and stabilizer, which helps to make it of great value for certain soaping off operations.

The liquid sodium silicate is best prepared for processing operations by diluting in hot water in preference to cold. Whenever concentrated liquid silicate solution has been heated up it should be diluted with hot water, never by the addition of cold water. Cold water may sometimes cause needles of silicate to crystallize out and these are very difficult to redissolve. These particular physical properties of liquid silicate are due to its colloidal nature mainly.

Both sodium meta silicate as well as the liquid silicate in combination with other alkalies such as caustic soda possess high detergency in their emulsifying of pectins (natural fatty oils found in raw cotton) and scouring action exerted on cotton goods during kier boiling and other types of scouring operations.

Silicate of soda liquid compounds have numerous impurities which are partially though seldom removed completely even from the crystalline sodium meta silicates. These impurities are titanium, iron, aluminum and magnesium. Titanium and iron impurities are very troublesome when the liquid silicates are used in peroxide bleaching. Iron is more widely recognized as being the most troublesome but Stericker[1] and other authorities tell us that the presence of titanium will decompose a peroxide bleaching bath very quickly and is a more dangerous calalyst than iron in a peroxide bleach bath. This catalytic action may cause a tendering action on the goods under process similar to "iron spots" on bleached goods which sometimes cause overbleaching and the formation of oxycellulose. Due to this catalytic action silicates and the peroxide bleach bath must be kept free of iron and titanium and also run in machines free of copper or brass, for it exerts this decomposing action on a peroxide bleach bath. Many a hosiery dyer has run rayon hose in a monel metal machine and on finishing his bleach has found tendered rayon hose. This is due to the presence of copper in the monel metal used on that particular machine. The present type of stainless steel machine using stainless valves has proved beneficial for improving the peroxide bleaching of hosiery.

In practice, textile chemists and bleachers have found since the introduction of sodium meta silicate to the textile industry that a peroxide bleach using it in place of commercially purified liquid sodium silicate usually lowers the quality of the bleached goods. Plant chemists and bleachers are more interested in obtaining better grades of liquid sodium silicates, freer of the troublesome impurities for their peroxide bleaching operations than further experimentation and possible adoption of sodium meta silicate on some types of bleaching operations. The greater the purification of the liquid silicates the more uniform and easier duplicatable are results obtained in peroxide bleaching of cotton goods.

Practical Application

(1) Kier boiling of cotton goods—for whites, and kier boiling of cotton goods for colored work.

(2) Scouring bath—Finishing off rayon and cotton prints and dyed goods. Rinsibility of goods scoured with sodium silicate.

(3) Preparation of rayons
All viscose goods
All acetate goods
All acetate-viscose goods.

(4) The use of silicates in peroxide bleaching cotton, viscose rayon, acetate rayon.

Kier Boiling

Kier boiling of cotton goods has many factors that must be considered and there are almost as many advocates of different kier boiling formulae as there are bleacheries. Though several plant officials may run different formulae they all have the same goal in view, that of obtaining a thoroughly kiered or scoured out lot of cotton goods suitable for the subsequent dyeing or bleaching operations.

There are many finishing plant officials and chemists that prefer to use the sodium meta silicate in combination with caustic and some phosphate such as tri sodium phosphate or tetra sodium pyro phosphate. Such plants, if they are located in areas where the raw water supply is hard and contains iron, calcium and magnesium, may replace 30 to 50% of the caustic with equivalent amounts of sodium meta silicate and a phosphate. This type of kier boiling formula possesses these advantages:

(1) These kiered goods may be used for both white bleaching and colored work.

(2) This formula possesses these particular valuable properties; (1) high detergency due to the caustic and meta silicate, (1) The phosphate portion of formula plus the meta silicate will help solubilize and remove the iron from the kiered goods.

This property of solubilizing and removal of iron from the raw water supply in the kier is stepped up noticeably by the sodium meta silicate, due to its colloidal action and its weakness to combine with iron on goods to be bleached and used for white. A kiering formula using sodium meta silicate or liquid sodium silicate in combination with caustic soda has proven very satisfactory but many plant officials do not use these goods for colored work.

This formula will give a bleached goods of great purity of whiteness and this is due in a large degree to high detergent action of the silicates in the emulsifying of the natural waxes and oil found in raw cotton.

The use of silicates, especially the sodium meta silicate, is increasing in the scouring operations on cotton and rayons. An addition of sodium meta silicate of 1 to 3 or 4 parts of soap or sulfonated fatty alcohol will give a full sudsy scouring bath that is useful for scouring off printed rayons and cottons. The same type of bath using slightly less sodium meta silicate is of value for soaping off of vat, napthol and diazotized and developed dyed cottons and rayons for the addition of the sodium meta silicate to scouring bath acts as a "builder" and gives improved detergent action to the scouring operations without injurious effects on the dyed or printed colors.

Liquid sodium silicate is not recommended for this type of scouring operation as it is not always satisfactorily removed in the rinse which may be cold.

Another valuable scouring off formula is using 4 parts soap or sulfonated alcohol, ½ to 1 parts sodium meta silicate, and ½ to 1 parts sodium meta hexa phosphate. This formula gives the added detergent action of sodium meta silicate plus the water softening action of the phosphate compound which gives longer life to the soap or sulfonated alcohol.

---

[1] Sodium silicates in the Textile Industry. American Dyestuff Reporter, May 6, 1938. Dr. William Stericker, Philadelphia Quartz Co.

This latter formula is very useful for printed or dyed viscose spun rayons to be given a resin or permanent finish as it assures the finishing of a thoroughly scoured goods and the goods can be rinsed free of any trace of the materials composing the scouring formula.

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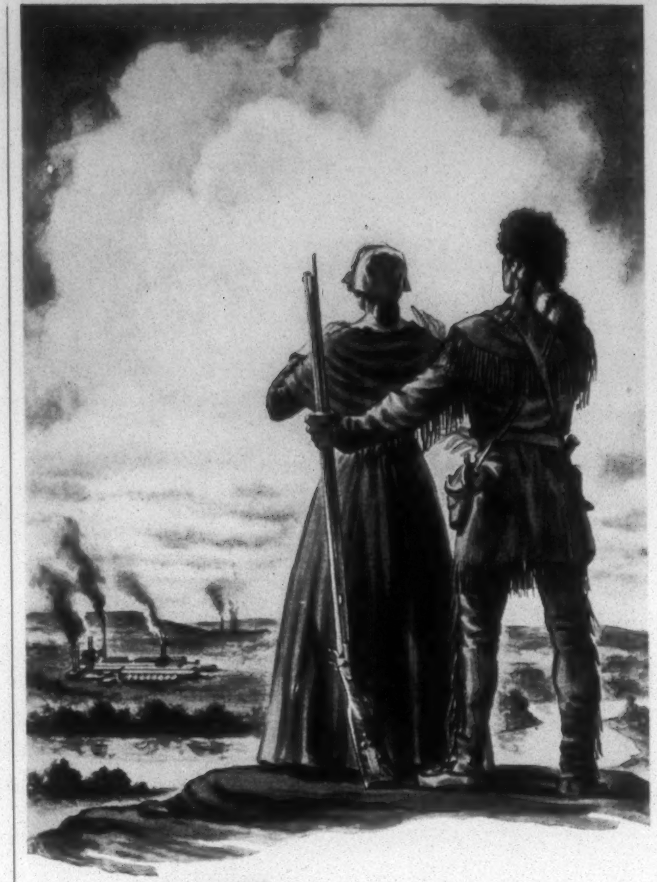

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Additional Data On Cotton Duck Order

Following the issuance of General Preference Order (M-91) on Cotton Duck, a number of questions of general interest have been presented to the War Production Board which can be answered without an official interpretation of or an amendment to the order. They are as follows:

1. Mills having seconds, run-outs, and over-runs, or short lengths longer than ten yards, or cotton duck on hand has been rejected by the inspector at the plant as not conforming to the specifications of a particular contract, should send a detailed list of the amounts, types and constructions to the War Department, Office of the Quartermaster General, Attention, Lieut. Col. R. T. Stevens, and to the Navy Department, Bureau of Supplies and Accounts, Attention, Lieut. J. G. Dean. Upon receipt of rejection of these offers from both the Army and the Navy, mills are free to use such cotton duck without restriction under General Preference Order M-91 and may, therefore, sell such duck to any other person who, also, may use it without regard to the restrictions of General Preference Order M-91.

2. Painted awning stripe duck is not cotton duck in the "greige, dyer or proofed state" but is cotton duck which has been processed beyond that stage and, therefore, is not subject to the restrictions of the order. However, no new stripes may be painted on any cotton duck after the issuance date of the order. This same situation also applies to gem duck which has been processed for use in the manufacture of shoes by processing which has gone beyond the "greige, dyed or proofed state," as such fabric is, again, not cotton duck as that term is used in the order. Nevertheless, no gem duck which is in the "greige" on the issuance date of the order should be further processed. Furthermore, certain shoe ducks or gem ducks, by reason of their weight, are not within the scope of the order in that they weigh less than 7¾ ounces to 29 inches. For example, 8-ounce, 30-inch gem duck weighs 7.73 ounces to 29 inches, and is, therefore, not covered by General Preference Order M-91.

3. Paragraph (e) of General Preference Order M-91 has raised many issues.

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In the first place, any duck delivered pursuant to the exception provided for in paragraph (f) is not restricted as to use by paragraph (e), in view of the words, "Except as provided in paragraph (f)," at the beginning of paragraph (e). It also will follow, after March 31, 1942, that any cotton duck delivered pursuant to the provisions of paragraph (g) will be subject, as to its use, only to the provisions of paragraph (g), and a preference rating, therefore, will not be required, as all of such cotton duck will be delivered pursuant to specific authorization of the Director of Industry Operations and, therefore, is excepted from the restrictions of paragraph (e) by reason of the words, "unless specifically authorized by the Director of Industry Operations," in the opening phrases of paragraph (e). Furthermore, by reason of the incorporation of Priorities Regulation No. 1, cotton duck sold and delivered under allocation orders may be used without restriction under paragraph (e), as the relevant section of Priorities Regulation No. 1 provides: "Allocation orders issued by the Director of Priorities (now the Director of Industry Operations) shall take precedence over any preference ratings assigned to deliveries under particular contracts or purchase orders."

Several companies have indicated a desire to file the certificates called for by paragraph (g) (3) with the suppliers prior to the month in which delivery is expected. Such certificates should, therefore, be dated as follows: "Dated as of April 2, 1942, this 10th day of March, 1942," and similarly for deliveries in May, June, etc. Persons filing these advance certificates, however, must make certain that the facts stated therein are true when the duck is delivered and, if subsequently occurring facts render any statement in the certificate untrue, they must withdraw the certificate from their supplier forthwith, and proper corrections made.

Paragraph (e) also restricts the use of stocks in jobbers' and in other manufacturers' hands and duck in retail store not made up into garments. If these stocks are longer than ten yards in length, they must be offered to the Army and to the Navy, in the same manner as mill seconds, run-outs, etc., described above, and written rejection by both of the armed services secured prior to their sale or use. However, retail stores and others should make sure before sending in any such offers to the Army or to the Navy that the cotton duck has not been processed beyond the "greige, dyed or proofed state," and comes within th ewidth and weight limitations of the order.

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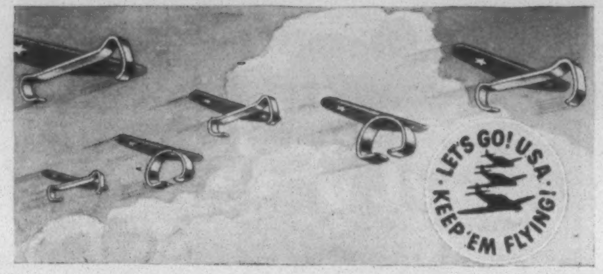
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Strikes in February Involved 375% More Workers Than Month of January

The number of strikes in war production plants during February increased 77 per cent over January, involved 375 per cent more workers and resulted in 206 per cent more man-hours being lost than during the preceding month, the National Association of Manufacturers revealed the other day.

The Association pointed out its report on strikes was compiled from reports in metropolitan newspapers and papers in principal industrial centers and did not purport to cover every strike action.

Comparison of strikes during January and February, the Association pointed out, indicated the policy of "Strikes As Usual" had not abated despite the seriousness of the war.

The Association's tabulation of the strikes follows:

	Jan.	Feb.
War Industry		
Strikes	43	76
Men involved	15,512	70,905
Manhours lost	1,750,224	1,192,152
Non-defense		
Strikes	25	27
Men involved	13,108	11,773
Manhours lost	1,750,224	1,192,152
Total		
Strikes	68	103
Men involved	28,610	82,678
Manhours lost	2,412,200	3,220,976

The strike report pointed out the man-hours lost in defense plant strikes alone last month was the potential work time to build upwards of 200 four-engine bomber planes or 2,000 dive bombers.

Majority of the strikes in defense plants involved C.I.O. locals. Six of the strikes were jurisdictional disputes between C.I.O. and A.F. of L. locals. 44 involved C.I.O. and 22 A. F. of L. locals. The remainder involved independent unions.

A. F. of L. local unions were involved, the Association said, in 20 of the 27 strikes at non-defense plants. Four strikes involved C.I.O. locals and the three others involved independent unions.

The Association pointed out a majority, if not all, of the strikes at defense plants could be described as "critical." Production of such vital and basic war products or materials as the bomber parts, anti-aircraft guns, ships and ship parts, armor plate, machine tools and dies was delayed because of strikes, the report revealed.

Various reasons were offered to justify the strikes, according to the newspaper reports, but among the more unusual was that advanced by 160 welders who "walked out" because a foreman used "bad language." Another strike of 10,000 men was called because a worker slapped a co-worker in the plant.

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Cotton Good Markets

New York.—Highlights of the cotton goods markets have been the setting of a price ceiling on finished goods and the resignation of Guthrie as head of the WPB's textile, clothing and leather goods division.

Practically everyone concerned feels that the method of arriving at a ceiling in the case of the finished goods ceiling was poorly done. Regardless of intent, necessity, expedience, or whatnot, the setting of an arbitrary ceiling at early March levels on an individual company basis works a hardship on the more patriotic and reputable firms, and allows the chiseler and unscrupulous merchant to continue reaping exorbitant profits. The firm which has kept its prices in line with costs must freeze prices at present levels, with costs constantly going up. The chiseler, who had boosted his prices beyond any reasonable profit, may continue to sell at this high price, and rising costs will not materially effect him. This is just another case of a bungling, fumbling, inept handling of important matters from Washington.

The reaction of the textile markets to the resignation of Guthrie has been rather varied. Some, particularly woolen and rayon interests, say that Guthrie's resignation was a face saving gesture, and that he had not been capable. In this connection it may be noted that Guthrie did not give those industries a clean bill of health as he did the cotton textile industry.

Dr. Murchison, president of the Cotton-Textile Institute, said that cumbersome Government machinery is responsible for most of the troubles in the war effort. He said: "The fault lies in the cumbersome, complicated, labyrinthian structure of Government machinery and the use of procedures which strangle decision, delay action, and entangle execution in a maze of legal technicalities and restrictions. While the Government stumbles over its own red tape, industry itself is virtually prohibited from taking any converted action on its own part to compensate for Government deficiency. * * * The cotton textile industry can supply and supply promptly every yard of cotton fabric necessary for the war. It is not only able but willing, eager and anxious. It could and would, in fact, if permitted, perform this great task on its own initiative. But the bold and brutal truth is that the industry is not allowed this high privilege."

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Cotton Yarn Markets

Philadelphia.—Of interest to the producers of sale cotton yarn is the Government's request for bids on 37,000,000 cotton undergarments, plus rumors that there are much larger requests in the offing. These garments may be manufactured from good quality carded yarns, instead of the usually required combed yarns.

The search for the combd yarns for the undershirts has already begun, and estimates are that about 3,600,000 pounds of 28s single yarn will be required for manufacture of these garments.

The sale yarn mills making such yarn already are busy, partly by reason of the numerous combed yarn consumers who, because Government buying has long dominated the combed yarn situation, have been compelled to use carded counts. Prior to the present bid invitation, it is related, the Army and Navy purchasing agencies have asked for combed garments, but have allowed offers to be made of carded goods of high enough grade to pass the test or tensile strength.

It is now assumed in the yarn trade that the Army has foreseen its inability to get enough of this underwear unless its usual preference for combed goods was abandoned. The carded yarn branch of the industry advised such a step long ago, it is recalled. It now is commented in the market that any carded knitting yarn mill making an acceptable grade for the highly-competitive civilian trade will be able to turn out suitable carded counts for the Army. The garments may not be as clean as combed, it is said, but otherwise there will be little or no difference. Inch to 1-1/16-inch staple cotton will be used, it is indicated.

Inquiries from non-defense consumers of sale yarn are reported more numerous and involving a much larger average amount per inquiry than there is yarn available for. In some quarters the belief has been expressed that certain distributors and mills have been favoring some customers and that the latter are accumulating yarn stocks, while others are nearing the end of their supplies. In the local markets this is denied.

Some observers explain that, assuming that only 50 per cent of yarn production goes into Government orders, on the average—and a number of sources have given up virtually all their regular business to work for the Government—civilian demand for yarn is still beyond the ability of the mills to make enough to meet the deliveries being sought.

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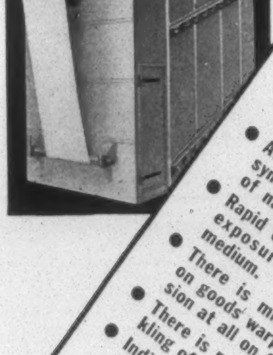
Roller Type DRYER



- Replaces drying cylinders or cans in the drying of many types of piece goods.
- Especially desirable for drying dyed fabrics before developing.
- Ideal for the drying and curing of piece goods in the wrinkle-proofing, shrinkage stabilization and water proofing processes.
- Also for fabrics made from synthetic fibres, and all kinds of nap fabrics.
- Rapid drying means only short exposure of fabric to drying medium.
- There is minimum of tension on goods warpwise and no tension at all on filling.
- There is no narrowing or wrinkling of the fabric.
- Individually motor-driven rolls adjust automatically to the speed fabric is fed.
- Important all-around savings are realized.

PROCTOR & SCHWARTZ • INC • PHILADELPHIA

Suggests Survey of Textile Needs

Suggestion that the W. P. B. make a fresh, complete and overall review of the textile situation is made by Scheuer & Co., in their fortnightly market letter in view of the fact that the War Department in the fifth supplemental defense appropriation bill for 1942 asks for $596,863,000 for the purchase of basic cloths, ruck, webbing and findings required for the Army during the first half of 1943. The textile brokerage house states such a review need not take more than a week's time.

"A free and frank discussion of Army standards and requirements, civilian and economic considerations and machinery potentialities should be included," states the Scheuer letter. "Perhaps a clearer understanding by the military, the textile industry and the public would result, and more effective performance follow. In the prevailing Washington mood of 'theirs not to reason why' such a review as we have suggested is not likely to take place.

"Therefore, we might just as well prepare for more, not less, disturbance of civilian supply—greater, not less, disruption of our merchandising and distributing machinery. Thus, the 1942 outlook calls for adjustment—and more adjustment. Dependent entirely on the fortunes of war, we may ultimately find ourselves catapulted into a flood of free production, but this phase is a long way off."

Discussing the War Department estimates of Army textile needs, Scheuer & Co. pointed out that they were based on the extreme and superior quality standards established during a period when an entirely different type and condition of warfare was contemplated by military authorities.

In the main, these requirements have not been laid out with any relationship to the equipment which the industry possesses," states the brokerage house. "This has resulted in a far greater relative disruption than occurred in the World War. In this Canada and England have followed a more practical program. The Axis powers, of course, have little choice in this matter due to the limitations of their raw supplies. Thus far we have heard of no serious impairment of military effectiveness abroad due to textile deficiency in either quality or quantity.

"For decades per capita consumption of textiles in the United States has been larger than anywhere else in the world, and at that we have never approached the consumption of our potential production. Therefore, a war emergency finds us better equipped than any other basic American industry. Arms production is our bottleneck, not textiles. If 'too much, too soon' is accomplished in armaments, delay in textiles supplies will never impair their effective use. There need be no scarcity of textiles for military requirements, and if a sensible and co-ordinated procurement plan is organized, little civilian hardship should occur. Indeed, if our mills were planfully operated 168 hours per week, we could accomplish a generous though not well-assorted civilian supply. Under any circumstances, production of rayons and spun rayon fabrics will have to be reduced.

Carthage, N. C.—Charges against H. F. Seawell, Jr., of making false reports and embezzlement while district referee in bankruptcy relating to the Starr Hosiery Mill have been completely dismissed in a rather spectacular manner.

The History of the Textile Industry in South Carolina

(*Continued from Page 30*)

In 1770 there seems to have been a general movement toward developing the State along manufacturing lines, and a committee was appointed to establish and promote manufacturing in the province, with Henry Laurens, Esq., as chairman and treasurer of the organization. Petitions were circulated for the raising of money and considerable funds were secured for the promotion of the industry.

Daniel Heyward, the father of Thomas Heyward, Jr., who was one of the signers of the Declaration of Independence from South Carolina, stated in a letter to his son dated February 19, 1777:

"My manufactory goes on bravely, but fear the want of cards will put a stop to it, as they are not to be got; if they were, there is not the least doubt but that we could make six thousand yards of cloth in the year from the time we began."

On the 13th day of March, 1789, Hugh Templeton deposited in the office of the Secretary of State two plans of inventions. One a complete draft of a card machine that would card eighty pounds of cotton per day and the other a complete draft of a spinning machine, with eighty-four spindles, that would spin ten pounds of yarn per day and only required one attendant to operate the machine.

In 1795, the General Assembly of South Carolina passed an act that a lottery be drawn and the profits used for manufacturing, as a result of which four hundred pounds were entrusted to William McClure to erect a factory to manufacture Manchester wares, provided that he employ and instruct seven white persons for a period of seven years.

The South Carolina Homespun Co. of Charleston was organized in 1808 and was considered the most important undertaking in the cotton mill industry up to that time. In 1808 the fad for wearing homespun became so acute that the House of Representatives of South Carolina passed a resolution that all members of the General Assembly should appear during the session clad in homespun suits.

The first mills in South Carolina were, for the most part, built in the coastal section of the State on small water powers, but after the war of 1812 had centered attention on the question of home industry, the colony spread out into the water powers of the Piedmont section, now the true textile Alsace-Lorraine of the United States.

It is surprising to learn that many of the outstanding men, noted for leadership, were opposed to the cotton mills, in theeir economic development of South Carolina. Jefferson was bitterly opposed in his early days to the cotton mills, and John Randolph said:

"The mills in the South would bring yellow fever, not in August, but from June to January, and from January to June."

John C. Calhoun expressed his sentiment with the following words:

"It is better for us that our cotton should go out in yarn and goods rather than in the raw state."

About 1816 many New England settlers came to the upper part of South Carolina and laid the foundation for tens of thousands of spindles which in due course of time

(*Continued on Page 48*)

"THEY ARE ALL FUGITIVE"

TINTINOL

Certified Fugitive Tints for

SYNTHETIC CUT STAPLE

WOOL · COTTON · SILK

BORNE SCRYMSER COMPANY

ESTABLISHED 1874

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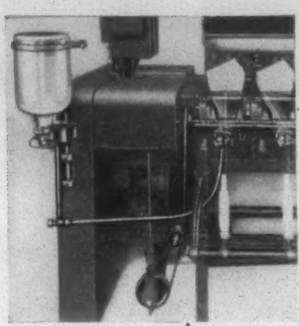

Laurel Coning Oil No. 443

for NYLON Yarn

Used almost since earliest introduction of Nylon yarn, Laurel Coning Oil No. 443 has given excellent results in many mills. Possesses excellent lubrication qualities, will not oxidize on standing. Removed from the goods in the regular scouring operation without use of special scouring materials.

Laurel Nylon Coning Oil No. 443—clean to handle—is applied on the coner in the usual way.

Information and sample on request.

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SOAPS • OILS • FINISHES

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MORE PICKS PER MINUTE!
Less Cost Per Bolt or Skein!

"CASCADE"
Brand Leather Belting on Your Looms

"SPIN TWIST"
Brand Leather Belts for Spinners and Twisters
Less Slip—Not Affected by Machinery Oil

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AKRON BELTING CO.
Akron, Ohio

Leather Belting Makers Since 1885
Suppliers to the Textile Industry for 57 years, and we expect to continue for another Half-Century

KEEP 'EM TURNING!

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The AKRON BELTING COMPANY
406 South Second Street
Memphis, Tennessee

Engineers in Power Transmission -- BY BELTING

FLASH! FLASH!

Prominent Textile Machinery Men Questioned By River Bridge Sentry

Ralph H. Chisholm, of Boston, advertising manager of Universal Winding Co., and Ike Wynne, of Charlotte, one of the company's Southern representatives, might now be selling winders by phone from a concentration camp, if the latter hadn't done some fast and fancy explaining to a State guard when they were caught recently in the act of taking colored movie shots of the mighty Catawba from the Wilkinson Boulevard bridge.

It seems it was Mr. Wynne's idea. The thought occurred to him that probably Mr. Chisholm would like to show the folks up East just how muddy the rivers around this part of the country can really become with a little help from the elements. And so, when they reached the bridge, they alighted from their car, strolled out on the first span, Mr. Chisholm focused his camera (made in America) and had just started grinding away, when Mr. Wynne felt a heavy tap on his shoulder and heard a gruff voice say, "Don't you guys know you can't take pictures of this bridge? Who the 'ell are you anyway and what's your story?"

Mr. Wynne, who learned to think pretty fast as a captain in the last war, explained to the sentry that they were simply taking pictures of the river, not of the bridge.

This explanation was entirely satisfactory, and the "prisoners" were released, to resume their journey to Charlotte, with some swell views of the rippling Catawba in all it's muddy glory.

War Production Board Tells How To Get Duck

In reply to several queries, the War Production Board has explained how manufacturers of various products made from cotton duck can obtain duck from the mills.

Order M-91 provides that no person unless specifically authorized by the Director of Industry Operations may obtain cotton duck unless he has a priority certificate with a rating better than A-2 and unless such certificate has been issued by the Director of Industry Operations or under his authority by the Army or Navy. Such certificate also must be issued directly to the person requesting the delivery or sale of cotton duck by the mill.

Therefore, under paragraph D of the order, preference rating certificates, on Forms PD-3 or PD-3A, must have been issued by the Army or the Navy and must have been issued to the person who is placing the order for duck, and must refer to a delivery of cotton duck.

In the case of a PD-3 which names a supplier of duck, and which is countersigned by an official of the Army or the Navy, the provisions of the order are complied with when the certificate is filed with the duck manufacturer by the person who is to receive the duck.

In the case of a PD-3A certificate, the person extending the certificate must certify to his supplier in addition to the certificate already printed on Form PD-3A that:

1. The certificate was issued direct to him.
2. It was issued for the purpose of rating a delivery of cotton duck.

He must also fill out the formal certificate set forth in paragraph D of the order that the duck is not to be used to replace inventory.

This procedure applies to all preference rated orders regardless of the date the orders were received.

Any preference ratings applied in the manner set forth in any general preference order, as for example under the Preference Rating Plan, or any P, L, or M order are not good for obtaining cotton duck.

See!

Early 1942 Rayon Yarn Shipments Running Ahead of Year Ago

Shipments of rayon yarn to domestic mills thus far in the new year are running ahead of the corresponding period of last year, states the current issue of the *Rayon Organon*, published by the Textile Economics Bureau, Inc.

Cumulative shipments for January and February aggregated 77,100,000 pounds as compared with 66,600,000 pounds in the corresponding period of 1941, an increase of 16 per cent. For February alone, however, shipments totaled 35,900,000 pounds, a decrease of 13 per cent as compared with 41,200,000 pounds shipped in January and 31,600,000 pounds in February, 1941.

"The decline in February shipments of rayon yarn from the high January level," it is pointed out, may be attributed in part to the fewer number of working days as compared with January, and in part to a curtailment in yarn output, particularly acetate yarn. The reason for the decline in acetate yarn production is raw material shortages. For some time now the tightness in the supply of acetate rayon yarn raw materials has been well known. These shortages are now showing up for the first time in terms of reduced acetate rayon output."

Stocks of rayon yarn in the hands of producers registered a further decline during February, amounting to 4,000,000 pounds at the close of the month as compared with 4,800,000 pounds at the end of January.

The inventory of rayon filament yarn held by broad weavers at the end of February totaled 22,700,000 pounds as compared with 23,000,000 pounds at the end of January and 28,000,000 pounds at the end of February, 1941.

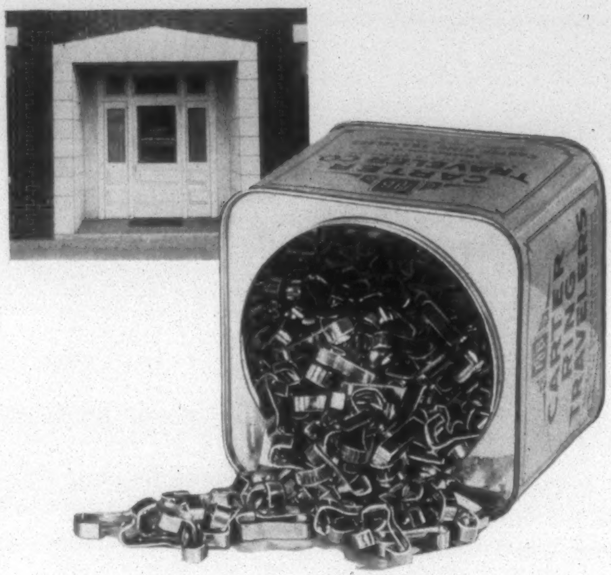
H. T. Nones Chief of Textile Staff of Bureau of Foreign and Domestic Commerce

Appointment of Hiram T. Nones as acting chief and consultant for the tetile staff recently established by the Bureau of Foreign and Domestic Commerce in the Division of Industrial Economy has been announced by Carroll L. Wilson, bureau director.

Mr. Nones has been identified with textile trade affairs in the Government's service for the past seventeen years. Previous to that he was employed in the New York market where he gained special experience in cotton piece goods, knitwear and rayon yarn converting primarily for export.

He entered the service of the Bureau of Foreign and Domestic Commerce in March, 1925, as assistant chief, Textile Division. On July 1, 1927, he was appointed a trade commissioner in the Foreign Commerce Service of the bureau to travel on special textile investigations in the Orient, Australia, and South Africa.

We'll keep
'em coming—



Steel Twister Travelers that will stand up under VICTORY Production Schedules . . .

We feel a double responsibility today for every Carter Traveler produced in our plant. We know we are making Travelers used for war production in many lines of textiles. Our responsibility extends beyond our customers—to the fighting forces who are depending on American Industry.

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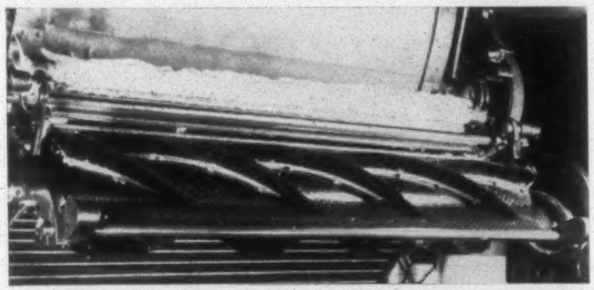
"How about fitting up several machines with the new Fullergript Flat Card Brushes? We can put them on ourselves without sending the brush cores away."

SUPERINTENDENT:
"That's a good idea. I've heard a lot about those brushes."

It's as simple as that to start an Order

WITH FULLERGRIPT you can realize a saving if you buy four preformed, spiraled, steel-backed brush strips. These can be quickly fastened to your flat-card wood cores by your own Maintenance Department. Thousands of flat cards in mills today have our durable, all-metal brush construction in use. Progressive mills are replacing old tufted constructions with dependable FULLERGRIPT.



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GRIND and TRUE your
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ON THE SPOT conditioning

Write for complete information:

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WORCESTER, MASS. . . . . . GREENVILLE, S. C.

The History of the Textile Industry in South Carolina

(*Continued from Page 45*)

were to hum in the Piedmont area. Among these pioneers were George and Leonard Hill, W. B. Shelden, William Bates, a close relative of Hammetts, the owners and operators of the Chiquola Cotton Mill at Honea Path, John Phillip and Lindsay Weaver, and James Edward Henry.

It is not definitely established who was responsible for the erection of the first cotton mill in South Carolina. There are divided opinions, some believe the Weavers, while others think the Hills should be given the distinction. Anyway, the records show that the Industrial Manufacturing Co., founded and erected in Spartanburg County by the Weavers, soon went bankrupt, and next we find the Weavers located in Greenville County, where they erected a mill on the Tyger River.

Many historians are positive that the Hills erected a mill in Spartanburg County in the year 1816. The mill does not exist today but the property now belongs to the Enoree Mfg. Co.

William Bates, after failing in his adventure in Spartanburg County, moved to Pelham, S. C., and started the operation of a mill.

As to the development in Greenville County Col. S. C. Crittenden states that there were three mills in the county during the year 1835. One was Vardy McBee's, on Reedy River, six miles from the village of Greenville; another known as the Weaver Mill was situated 19 miles north of Greenville, and the other was the Batesville Cotton Mill, located on the Enoree River ten miles east of Greenville, and was owned by William Bates.

According to the records of time a cotton mill was erected at Autun, South Carolina, now known as La-France, in 1838. It was built by B. F. Sloan, Thomas Sloan, and Berry Benson. The plant was capitalized at $50,000 and was operated by water power. It is claimed that this is the oldest mill in the South in continuous operation.

In 1846 William Gregg built the first big mill in South Carolina. The plant was located at Graniteville and contained 8,400 spindles and 300 looms. It was only after a long and bitter fight in the General Assembly that Gregg secured his charter for the organization of his mill. The application for the charter remained in the hands of the General Assembly for several years, and finally a favorable report, by the nine committeemen on manufacturing, was reported showing a majority of one.

The epoch marking periods in South Carolina of the cotton mill industry may be dated in the year 1847, when the Graniteville Co. first put its goods on the market, and the early eighties when other pioneers began to see the possibilities of the greatest industry in our State.

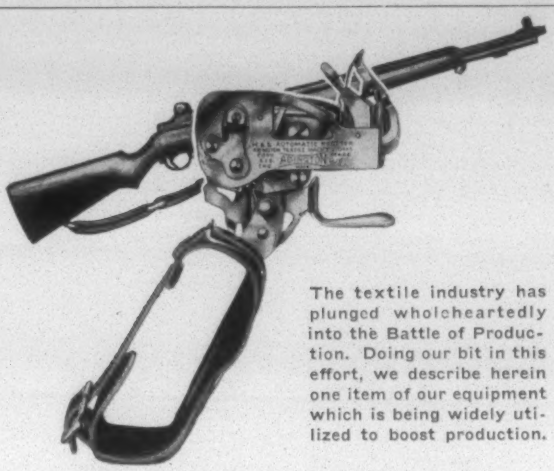
By 1860 the cotton mill movement had expanded to such an extent that no one could deny that the manufacture of cotton cloth was supplementing the raising of cotton. The textile industry and agriculture by 1860 had joined together and created a dual system of wealth that placed the State third in the per-capital wealth of the United States.

There were eighteen mills in South Carolina at the beginning of the Civil War and only eleven survived, nine of the eleven were in Greenville and Spartanburg counties. Emerging from the catastrophe with only eleven mills, by 1880 the number had increased to fourteen. In the chaos of the period the development of more plant lay practically dormant until the movement of 1880. Then in the same spirit of wisdom and courage with which General Robert E. Lee turned to his broken South, an unusually able group of men came forward to build up and guide the present-day textile industry. The movement from its emergence about 1880 until the present is purely a picture of industrial romance. The deans in this school of romantic adventure were D. E. Converse, Lewis W. Parker, Captain Ellison A. Smyth, Col. J. P. Hammett, Dr. W. C. Hamrick, Captain J. H. Montgomery, Leroy Springs, and D. A. Tompkins, whose field of influence was by no means limited to North Carolina. In the succeeding decade came James L. Orr, William Ernest Lucas, John B. Cleveland, Robert McCaughrin, W. B. S. Whaley, T. E. Moore, John Geer, Captain W. A. Courtney, and a long procession of strong young men. The earliest pioneers were the explorers. They blazed the trail. But it remained for the men just named to follow the trail and improve it. It would be unfair to those who ventured into the industry before Captain Smyth, Converse, Hammett and the many others, to single out one as the leader in the development since 1880. But in 1921 the publication "Commerce and Finance" was so impressed with the remarkable growth of the industry, that they were led to ask who had been the leaders in this so very important development; and being unable to answer the question to their own satisfaction, they mailed questionnaires to at least one officer of every important cotton mill of the South, asking him to consult with his principal officers and designate six men, living or dead, who in their opinion were best entitled to be considered as leaders by virtue of what had been done—or was being done, not only for their own enterprises, but for the interests of the Southern textile industry as a whole. As a result of the ballot, Captain Ellison A. Smyth led the list.

According to Captain Smyth's own testimony, the beckoning call of one already within the industry, William Gregg, led him into the field, just as the industry today is calling to enterprising young men who possess inspiration, determination, and the will to become pioneers.

The ranking position South Carolina holds in textile manufacturing today is a mark of distinction attained by men of foresight coupled with an undaunted spirit. Picture if you can, an industry in our native State with only 30,000 spindles in 1860 that has now grown by leaps and bounds until the number now totals between 5,500,000 and 6,000,000 spindles. Only North Carolina outranks South Carolina in the total spindles, yet South Carolina takes first place in all America in total active spindles and active spindle hours. There are approximately 200 mills in South Carolina today employing practically one-fifth of the white population, and manufacturing from cotton, jute, rayon, wool and silk practically every known necessity for the existence of human beings.

Today, South Carolina's textile industry is great because of the friendly relations that existed from the beginning between those who were working to build it. Tomorrow, South Carolina's great enterprise will be still greater only through a spirit of mutual confidence and by mutual understanding.



The textile industry has plunged wholeheartedly into the Battle of Production. Doing our bit in this effort, we describe herein one item of our equipment which is being widely utilized to boost production.

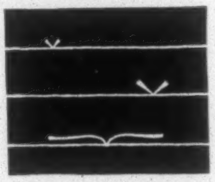
In the Battle of Production use this automatic "weapon"!

ABINGTON WEAVER'S KNOTTER

The Knotter that automatically scissor-clips the tails

RANGE OF TAIL LENGTHS

Abington Knotters produce knots with any length tails from 5/16" down to minus 1/16". Tails are automatically scissor clipped, each pair of tails the same length, and all tails uniform knot to knot.



Helps keep winder production right up to the MAXIMUM!

Existing machinery has got to perform as never before to fill the staggering total of war needs. Abington Knotters help keep machinery IN PRODUCTION!

- —a production gain of at least 10% over hand tieing.
- —a girl handles 2 to 3 more boards per 6 hours.
- —knots positively non-slip.
- —small, tight knots, acceptable in place of adhesive splice, and ideal for blister-free rubber coated goods.

Send bobbin or fair sample of yarn and we will return Sample Knot Card and details of

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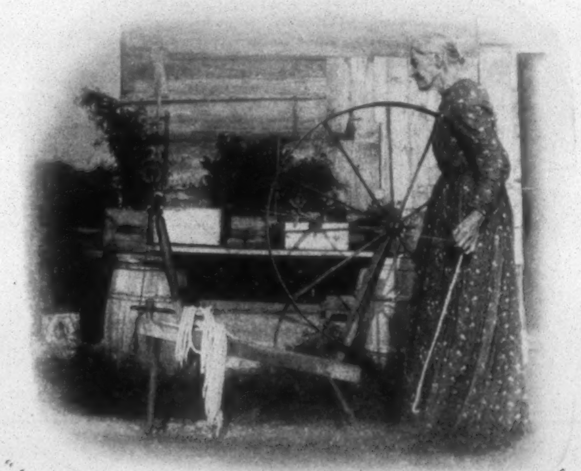

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Massachusetts Legislature Thanks People of North Carolina and South Carolina

Resolutions thanking the people of the State of North Carolina and the people oft he State of South Carolina for their hospitality, friendship and aid to the citizens of the Commonwealth in the United States Army during the fall maneuvers of 1941.

Whereas, During the months of October, November and December, 1941, many citizens of this Commonwealth, in the military service of the United States, have been engaged in maneuvers throughout the State of North Carolina and the State of South Carolina; and

WHEREAS, The men of this Commonwealth engaged in said maneuvers have told its citizens of the great hospitality, friendship and aid so generously given to them by the people of the Sovereign States of North Carolina and South Carolina; and

WHEREAS, All citizens of this Commonwealth have derived comfort, happiness and inspiration from these kind and patriotic acts of our fellow Americans, for they again prove the unity of these United States; therefore be it

Resolved, That the House of Representatives of the General Court of Massachusetts does hereby express its thanks and gratitude and the thanks and gratitude of the citizens of the Commonwealth to the people of the Sovereign States of North Carolina and South Carolina for their hospitality, friendship and aid so lavishly given to the citizens of Massachusetts, who as members of the Army of the United States took part in the maneuvers during the fall of 1941; and be it further

Resolved, That duly authenticated copies of this resolve be forwarded by the Secretary of the Commonwealth to His Excellency the Governor of North Carolina and to His Excellency the Governor of South Carolina.

Bombing of Industrial Plants To Come

Military authorities have not minced words in warning repeatedly that this country must be prepared to defend itself from air attack. The logical aim of war from the skies is the disruption of civilian and industrial life with consequent high-cost-of-interruption to production and morale. And the weapon which it is expected will be used most is the fire bomb.

The first step in preparing against such anticipated attack is a thorough check-up of fire fighting equipment now in place. Alarm and sprinkler systems and fire extinguishers are false promises of security unless they are ready for instant use when danger strikes. Alarming reports of the sabotage of fire extinguishers in different sections of the country emphasize the importance of regular check-ups and a 24-hour guard over all fire fighting apparatus.

Factories, hotels, schools, department stores and many other industrial, institutional and commercial establishments are already equipped with approved fire extinguishers. They can be supplemented by buckets of sand and long-handled shovels. These are the common and safe weapons for fighting the light magnesium incendiary bomb effectively, as demonstrated in "Fighting the Fire Bomb," the training film approved by the Office of Civilian Defense.

As shown in the picture, there are two phases to the burning of the magnesium bomb. The first stage is the violent burning of the thermit igniting charge within the body of the bomb, when melted metal and flames spurt for several feet. During this active eruption, which lasts for about a minute, no attempt should be made to approach the bomb. It is important to watch and wait at a safe distance, especially since the bomb may contain an explosive charge which will go off during the thermit reaction.

This thermit reaction ignites the magnesium, which continues to burn quietly for ten to twenty minutes, is left undisturbed. In this second stage, the bomb can be approached closely and fought with water spray. At this point, extinguishers enter the picture.

All types of extinguishers discharging water or chemicals dissolved in water can be used directly on the bomb itself, if their normally solid streams are converted into a spray by "thumbing" the stream at the nozzle. These include the pump tank (with or without anti-freeze solution), the soda-acid, foam, loaded stream and gas-cartridge types.

The use of water spray serves two purposes. It speeds up the combustion of the bomb, so that it burns out quickly; it also serves to wet down the area around the bomb and restrict the spread of fire. It will ordinarily require two two and one-half gallon units to dispose of one bomb and its surrounding fire.

A coarse spray of water helps control the burning bomb; a solid stream causes it to flare up explosively. The solid stream of the extinguishers, however, can be used on fires started by the bomb. Take care to keep the stream away from the bomb itself.

Although only water-filled and water-solution types of extinguishers are effective on the bomb itself, the vaporizing liquid (carbon tetrachloride base) and carbon dioxide types can be used on fires started by the bomb, just as they are used on fires started from any other cause.

If the bomb can be approached before it has set fire to its surroundings, dry sand can be used. The sand is shoveled over the burning bomb simply to cut down its radiant heat; sand does not extinguish the bomb. Covered with sand, the bomb can be scooped up in a shovel and dropped into a metal pail, in which a layer of several inches of sand has been placed. By running the handle of the shovel under the handle of the pail, to protect the hands from heat, the sand-smothered bomb can be carried from the premises and dumped where it will burn itself out harmlessly.

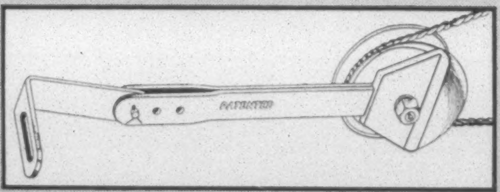
To use this fire fighting equipment with maximum efficiency, industrial workers must understand its operation. Approved fire extinguishers should be quickly available in any part of the structure, and every man on the job should know how to use them. Actual fire extinguisher drills are the most effective way to get the "feel" of an extinguisher.

Regular recharging of all fire extinguishers is part of the preparedness program. Frequent inspections are an added precaution against sabotage and give assurance that these protective units are in good operating condition, ready for immediate use.

• UNIFORM SPINDLE SPEED, UNIFORM TWIST AT ALL TIMES • NO SOFT OR SLACK YARN DUE TO BAND SLIPPAGE • NO MORE DAMP WEATHER OR DRY WEATHER OR MONDAY MORNING BAND TROUBLE • LUBRICATION NECESSARY ONLY ONCE A YEAR • NO DOFFING OF FRAMES NECESSARY FOR INSTALLATION

How to MODERNIZE *with* MODERATION

--- instead of Replacing Troublesome BAND Drives, REMOVE Band Trouble with



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Student Officers Elected for Textile Exposition At N. C. State College Textile School

Raleigh, N. C.—Textile students of North Carolina State College elected Kenneth A. Shinn, Jr., superintendent, and William F. LeGrand, assistant superintendent of the 23rd annual Students Textile Exposition which will be held on April 30th. Mr. Shinn is a son of K. A. Shinn, superintendent of Cannon Mills No. 8 at China Grove, and Mr. LeGrand is a son of R. T. LeGrand, treasurer of the Shelby Cotton Mills at Shelby, N. C. Both these young men are members of the senior class and have made good scholastic records at North Carolina State College. Mr. Shinn is also president of the State College Chapter of Phi Psi, national textile fraternity, and Mr. LeGrand is president of the Tompkins Textile Society.

Other members of the senior class who were honored by their fellow students are as follows:

Foreman of yarn manufacture—W. S. Williams, Jr., Middlesex, N. C.

Foreman of weaving—Robert L. McLaughlin, Pittsburgh, Pa.

Foreman of Designing—W. M. Sutton, Rocky Mount, N. C.

Foreman of Textile chemistry and dyeing—T. J. Sarandria, West New York, N. J.

Foreman of knitting—J. Fred Blue, Carthage, N. C.

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Members of the dance committee who will supervise the annual Textile School dance are:

H. C. Nixon, Hertford, N. C., chairman.

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Benefit From Research

(*Continued from Page 20*)

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The wools damaged by the fire were held on consignment by the selling agency, for the growers, though a large part of the raw material was ear-marked for the account of mills working on negotiated contracts for the Government.

About 40 engines were used and six firemen were injured, before the blaze was under control.

A TYPICAL ORDER...
and how it's handled by WISSCO

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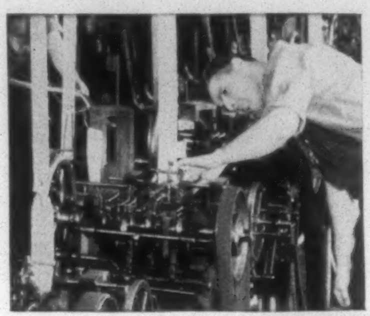
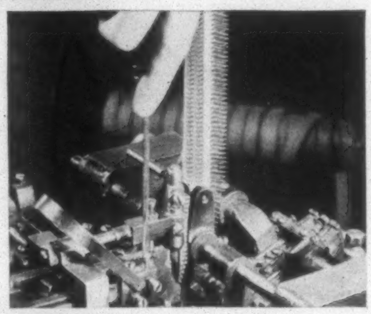
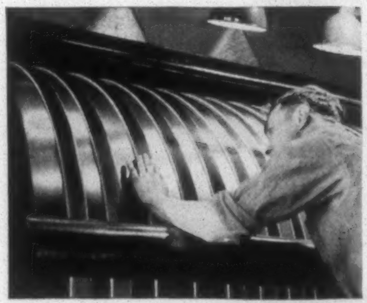


2. Our card setter runs off a test sample which is checked against your work card. Then . . .



3. All machine settings are checked and double checked to assure exact adjustments.



4. Your order starts into final Production. Shown here is the grinding operation prior to final inspection . . .

5. Every inch is inspected by hand—to make sure that your order is 100% perfect.

6. And sent on its way to you is Wissco Card Clothing—made with scientific exactness on most modern equipment. Your work card is filed to make future ordering easy and accurate for you. Wickwire Spencer Steel Company, 500 Fifth Avenue, New York, N. Y. Buffalo, Worcester, Chicago, San Francisco.

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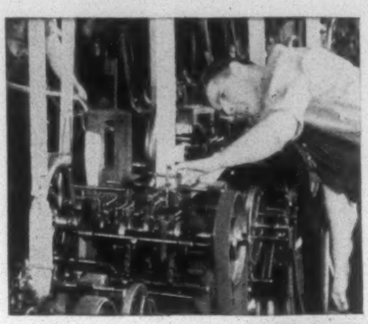

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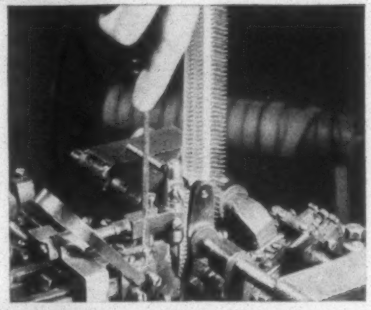

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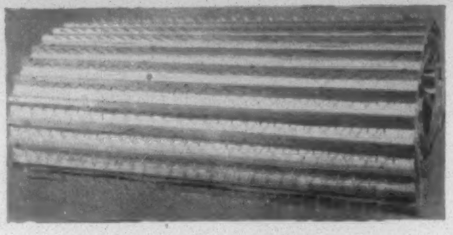

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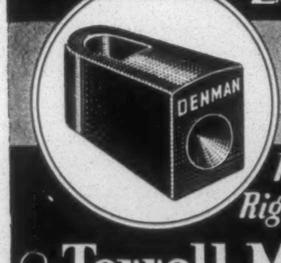

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Aralic—Fiber From Casein

(Continued from Page 22)

plastic, or whether it is going to be modified into nylon. There is no reason to judge, therefore, from any present knowledge you may have of proteinaceous materials what that protein is going to act like when it has been modified into a fibre, because you may have, at some time, drunk some of it as milk, eaten some of it as cheese, or worn it for a great many years as buttons on your coat. You may know that cheese sometimes gets objectionable, but I never heard anyone complain about the buttons on their coat for that reason. By the same token, since infinitely more care and chemical ingenuity are used in the manufacture of this new protein-base fibre, you should be able to free your minds of any idea except that the fibre will gracefully take and keep its place in polite society. You can forget that the early attempts at such fibres made by the Italians and the Japanese were as unstable as some of their political philosophies. We expect and feel that Aralac will justify the position awarded it as a product of American free enterprise and that further American free enterprise will be ingenious enough to present it to the American public as raiment of true textile ingenuity.

You will, from time to time, be presented with other half truths, rumors, incomplete and erroneous information, but if you will check or examine the foundation of such rumors or information, you will quickly evaluate it at its true level. Sometimes even our friends will present Aralac in terms partly true and partly false. So far as we can, we will quickly correct any such statements; but where the statement may be true but incomplete, he will attempt to fill in the details. It is our job as raw material suppliers to furnish you with all possible technical facts concerning the products we supply uncolored in any way and free from incomplete and inconclusive data.

Let me refer, along this line, to a statement recently made that is slightly misleading. The statement is made that casein "is a chemical building block for a cheap serviceable fibre." A further statement is made which may possibly be true but which is certainly incomplete and misleading in its hopes. The statement is, "(This fibre) can be made on existing rayon machines with but slight adjustment." It is conceivable that a casein filament might be spun on existing rayon machines considering solely the extrusion of a viscous liquid through a spinnerette into an acid coagulating bath and adjusting for the slow coagulating rate for such a solution as compared with the viscous cellulosic dispersion. The analogy would stop there, however, because whereas the cellulose would be converted into a fibre subject only to simple washing and surface treating processes, yet the casein regenerated as a filament is still very young in its life as a fibre and must be still further chemically modified, restricted, and molecularly treated before it can serve any useful purpose as a textile fibre. While I know little about rayon manufacture, I feel quite sure that one of the reasons the Italian and Japanese protein-base fibres have not yet progressed very far is because they did adopt rayon technique, because their fibres were developed along rayon lines and because they were not treated as separate and distinct entities apart from cellulosic fibres. I have no illusions that any processes or techniques we have developed in the manufacture of Aralac would be useful in the manufacture of rayon, and without rather convincing evidence I should dispel the illusion that Aralac or anything like it could be successfully or economically made in existing rayon plants.

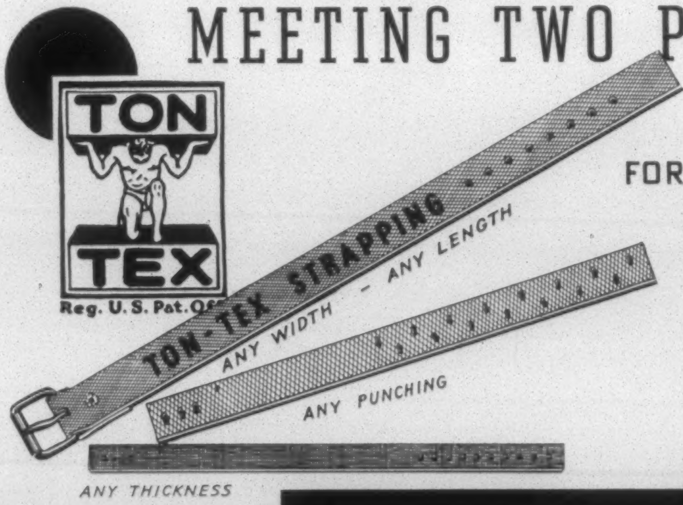
I have said that your organization is unquestionably the planning department of the textile industry. You have a right to know, therefore, what our program of development is, where we started, where we are and where we are going. Basically, we use in this country the butter fat from approximately 50 per cent of the milk production without bringing to market the residual skim milk. Uses have lately been increasing for some of this skim and the Lend-Lease program as well as present domestic demands call for the utilization of much of this skim which comes to plants equipped for concentrating or drying it. There is still a great amount left, as it arrives at small isolated creameries without sufficient equipment to handle it and this can be utilized for casein. Still larger amounts of skim never leave the farm. The large source of protein is available, but the difficulties of accumulation and collection are correspondingly great. The solution of this problem undoubtedly lies with a few large companies intimately acquainted with our agricultural problems and not with industrial companies. This problem calls for chemurgic and not industrial planning. The present yearly consumption of approximately five million pounds of casein for fibre manufacture may possibly be expended to ten million pounds without more disturbance to the present casein market than does exist now. This country normally has been manufacturing approximately forty million pounds and the Argentine an equal amount each year.

If we expand beyond this at this time we probably should do it without disturbing present users of casein and start on some new program of casein collection. Some mention has been made of soya bean protein, but it still is very early to think of this even if it made an equally desirable fibre because even after more than ten years work and after a tremendous capital outlay, the production of soya protein is still but 10,000 pounds per day and this is all in demand for other uses and is not comparable to the casein of fibre-making quality. I still believe that much less equipment is needed to bring to market vastly greater amounts of milk casein than would be true of a useful protein from another source. Protein can be extracted from grass and many other agricultural products, but so far it has been vastly more economical to let the cow eat the grass, let her act as our initial processing factory, and recover the processed protein from the milk.

Assuming we have collected the raw material, the mechanism of our fibre production are as follows:

The casein arrives at our factory and after very careful blending is dispersed or dissolved in water with suitable solvents. The viscosity is adjusted to a uniform base. All adventitious materials or aggregates of any kind are removed and the product forced through spinnerettes into a coagulating bath. The wet tow from a number of spinnerettes is collected and put through a succession of treatments both wet and dry which transform the casein molecule into a new and resin-like compound of which casein is but a part. The type, number, and sequence of steps are varied and determined by the use to which the finished fibre is to be put. The final treatments are given the fibre only after it is determined for what industry the fibre is destined.

It is true that a great many types and varieties of fibre could be made, but present times demand simplification of grades, even if our own production problems did not demand such simplification. Aralac, therefore, is made with a fibre diameter distribution substantially equivalent to 50's, 60's and 70's wool or average 30, 25, and 20 micron diameter. For some uses, a straight, uncrimped fibre is most desirable, whereas for textile purposes a



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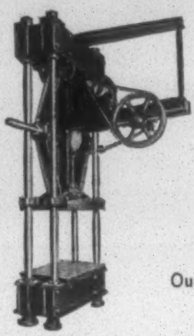

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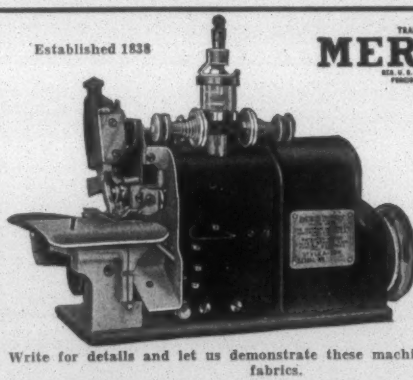

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PACKAGE DYEING AND BLEACHING
All Types Colors on
Cotton Yarns
PIEDMONT PROCESSING COMPANY
BELMONT, N. C.

natural, wool-like crimp seems most useful. For a totally different use a product called "Wavecrepe" was developed with a relatively fine and permanent crimp. So far as our present facilities allow, we have recently made small quantities of this product available for the textile trade. It should be repeated that Aralac is offered and has been used by several industries because of the qualities of the fibre itself, and not because of any attempt nor desire to use it as a wool substitute.

We should continually repeat that we are not in competition with wool growers nor with manufacturers of rayon of any kind. It is desired only to produce a fibre of maximum utility and service to your industry regardless of whether it would be as a servant of other fibres or whether we utilize some of the known attributes of present fibres to serve our purpose and to enhance the value of our product. In any case our technology is directed toward the production of a new fibre useful in the textile industry but not because you need a new fibre or a substitute fibre. Rather, Aralac has found what normally is the case, that, as a new chemical development, it finds a place of its own in the textile sun and will probably make more desirable fabrics available to more people than ever before. As for the future, Aralac will contribute to the expanded uses of the products of your industry.

Our background is such that we have no preconceived ideas of what such a fibre should do or where it should go. We are trying sincerely to avoid any such freezing of ideas. What the fibre can do and what you can do with it is probably bounded only by our combined imagination. Basically, it is subject to many possible modifications, any one of which may offer a new field of usefulness.

The future for a protein-base fibre of this type will be in large measure determined by what you ask for. Substantially all our industrial uses of Aralac to date are the outgrowth of very close co-operation between you as designers and we as producers. There are already in the laboratory dozens of products each with a different appearance because of some slight modification in the process. It may take some time to equip ourselves for production in volume of any new product, but you and I both know that the earlier one starts on such developments the sooner such vision is likely to get into production.

Finally, I believe it well to leave with you the thought that regardless of what you attempt to do with Aralac you should consider that it is in many ways chemically similar to natural protein fibres, and its behavior characteristics follow in similar patterns. Whenever you have any finishing process to consider in connection with Aralac, it is well to treat the fibre like a sensitive, high-grade, natural, protein fibre and, in general, it will respond satisfactorily to such treatment.

Burlap Bags Used On Farms Should Be Unprinted

Raleigh, N. C.—Burlap tags used for shipping farm products this year should be unprinted to permit reuse in following seasons, Harry T. Wescott, marketing specialist of the State Department of Agriculture, said recently.

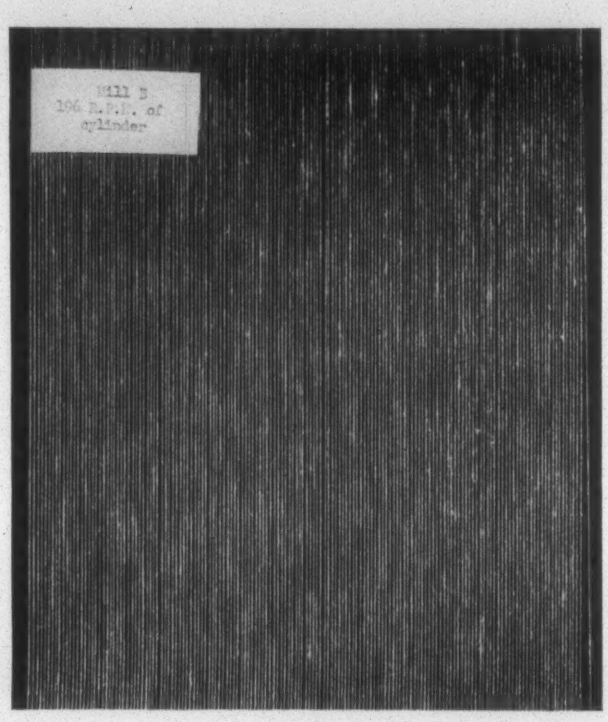
Because of the burlap shortage, he said, the bags must do for several seasons.

Test of Cottons Manufactured Under Different Card Speeds

(*Continued from Page 16*)

reported by the two co-operating mills. The sliver and yarn data were supplied by the writer who made the tests under standard conditions and on standard equipment in the testing laboratory of the Clemson Textile School at Clemson, S. C. The yarn was graded against the yarn appearance standards as developed by the U. S. Agricultural Marketing Service and adopted by the American Society for Testing Materials.

It appears to be the consensus of opinion among textile manufacturers that the following factors to a large extent govern the feasibility of increasing card cylinder speed: (a) Condition of the cylinder bearing, (b) condition of the clothing or fillet, and (c) amount of floor vibration. Other mill men believe that the card will operate efficiently at an increased speed provided the speed of the doffer comb is decreased. As a matter of general interest it might be stated that many of the mills co-operating in these tests have been running their card cylinders at increased speeds for more than three months and have experienced no mechanical difficulty in so doing.



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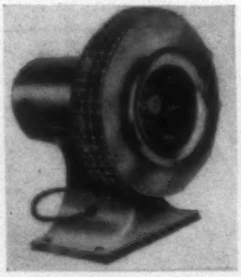
TEXTILE BULLETIN'S SEMI-MONTHLY DIGEST *of* WHAT'S NEW *in* MILL EQUIPMENT, SUPPLIES, BOOKLETS

Air Raid Sirens

Breuer Electric Mfg. Co., of Chicago, Ill., have developed and are now manufacturing three models of air raid sirens for industrial plants, office buildings, warehouses, mills and factories. The sirens will be marketed under the trade name "Tornado."

The following details about the Tornado Air Raid Siren are quoted from a circular sent by the manufacturers to the Engineering Sales Co., of Charlotte and Greenville, Breuer distributors in the Carolinas.

While Civilian Defense is planning on adequate air raid alarm systems for the general public, industry is expected to make its own preparations for "inside the plant." Sirens on town halls street corners, etc., cannot be heard inside the busy plant, to the extent that it will put every one "on the alert" instantly. It has also been proved in extensive tests that no siren, no matter low loud or how large, will penetrate factory walls and partitions, or from one floor to another, to give adequate protection.



Model No. 510—(1400 watts) Recommended for the factory, warehouse and all large open spaces. Can be heard above the usual noise and din.

Tornado Air Raid Sirens have been designed with this in mind. There are two models—one for the small departments, offices, laboratories, stock room, etc., and a larger one for the manufacturing areas which will definitely be heard above the usual din of machines at work.

"Belts for the Textile Industry"

"Belts for the Textile Industry" is the title of a new catalog just issued by the L. H. Gilmer Co., Tacony, Philadelphia. This 36-page catalog, illustrated in two colors, classifies the belt drives of the four principal textile industries: Cotton; Silk and Synthetic; Wool; Jute, Hemp and Flax. Within each industry, the drives are further divided into the several major applications and the belt or belts which are recommended are described with full specifications. Contains also complete listings on V-belts and connected V-belting, and Kable Kord flat belts and belting. Convenient engineering tables and formulas are also included.

Viscose Co. Announces New Rayon Staple Fiber

Development of a new rayon staple fiber designed particularly for use in rugs and carpets and known as "Tufton" is announced by the American Viscose Corp. As the name indicates, it is designed not only for the tuft of rugs, but is also a tough and durable rayon. In designing "Tufton" the company sought the combination of characteristics that would give it the greatest possible value for consumer satisfaction. Toughness was produced by combining the best possible degrees of resilience, flexibility and tenacity. Freedom from soiling, an important factor in floor coverings, was aided by giving the fiber special qualities of smoothness.

Rugs made with "Tufton" are more colorful than those made with the natural fibers, it is claimed, since rayon has better clarity of color than such fibers. This well-known quality of rayon plus the wearing quality of "Tufton" in a rug or carpet have given the new fiber an established place in the floor covering field. Research work on the fiber is being continued with the object of extending its field of usefulness.

New Brush Catalogue

Atlanta Brush Co., Atlanta, Ga., have recently released their 1942 Catalogue, a handsome 48-page book, carrying descriptions and illustrations of the brushes manufactured by this company for industrial use, including their special textile brushes.

A copy of the catalogue is available to any mill executive on request.

Magnetic Relay/Contactor

A new magnetic relay/contactor for use either as a relaying unit or motor starter has been announced by the General Electric Co. This new device, designated CR-2790, is especially suitable for the control of pilot circuits, as a fractional-horsepower motor starter, or for use in conjunction with a magnetic switch controlling large motors, heating or lighting circuits, or signal systems.

The relay/contactor can be supplied in either open form or enclosed in a general purpose housing. It is available in three contact arrangements—single-pole normally open, double-pole normally open, and double-pole, double-throw.

Dyed Textiles for War Use

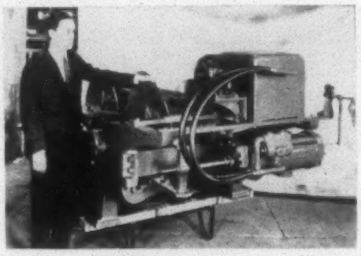
Many textile concerns will be compelled shortly to change their business over from civilian production to the production of goods required by the Government. Calco Chemical Division of the American Cyanamid Co., of Bound Brook, N. J., is endeavoring to aid these concerns in this change-over by issuing bulletins on the various classes of goods required by the Government.

The latest bulletin, No. 632, entitled, "Dyed Cotton Textile Items for War Use," is now available for distribution. Copies may be obtained by writing the Calco office at Bound Brook, N. J.

This bulletin lists the important cotton textile items required by the Government, summarizes the methods of processing them, and lists the type of dyes permitted.

Mammoth Variable Speed Transmission for Sou. Plant

The largest variable speed transmission to be equipped with hydraulic automatic control was recently built by Reeves Pulley Co., Columbus, Ind., for use on a rotary veneer lathe in a South Carolina plant.



This transmission, weighing 4,300 pounds uncrated, is nearly 9 feet long, 5 feet wide and stands almost 4 feet high overall. It transmits 26 H.P. at maximum speed and provides infinitely variable speeds over a speed ratio of 3:1.

Acme Steel Dividend Enclosure Promotes U. S. Bond Sales

To further the purchase of U. S. Savings Bonds, a unique use of space on their March 12th dividend check enclosures will be made by Acme Steel Co., Chicago. Printed on this form, which measures 8¼ x7 inches before folding, is the minute man and the message "For Victory . . Invest in U. S. Savings Bonds." Immediately below this striking statement appears:

"Shareholders will be interested to know that more than 70 per cent of all Acme employees buy U. S. Savings Bonds on the payroll allotment plan."

New Electron Microscope

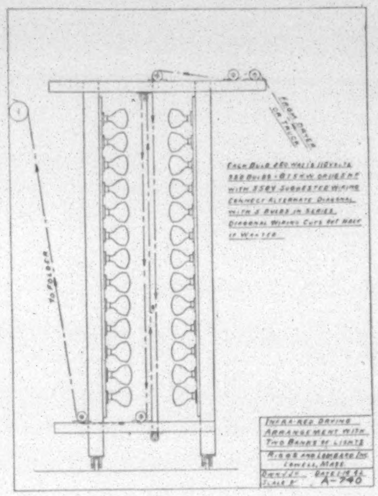
Heretofore unknown facts about fibers, dyes and textile chemicals will be revealed with the new electron microscope fully described in the February issue of *Textile Research,* official publication of Textile Research Institute, Inc., and of the Textile Foundation. Also discussed in that issue is the development through research of electrocoated fabrics.

Opening up to view infinitely small particles, the very existence of which could only be surmised with other instruments, the electron microscope provides a valuable research tool for science and industry. This new instrument permits magnifications 50 times greater than can be obtained with ordinary microscopes and permits study of objects even more minute than the wavelength of light. Among its potential applications is investigation of the effect of chemical and mechanical treatments on the fundamental properties of textile fibers.

Another step beyond conventional textile manufacturing operations is an electrostatic process for production and decoration of fabrics. First employed in making sandpaper, this process was adapted, after many years of research, to production of pile fabrics. In the electrostatic process, a backing fabric, coated on the face with a suitable adhesive, passes through between a positive and a negative electrode. Simultaneously, cut fibers, carried on a conveyor, enter the electrostatic field and are propelled at high speed toward the positive electrode. Intercepted by the fabric, the cut fibers imbed themselves endwise in the adhesive to form either an all-over pile or a pattern effect.

Carbonizing and Drying Cloth With Infra-Red Lamps

Riggs & Lombard, of Lowell, Mass., have recently designed an infra-red lamp unit for carbonizing vegetable matter in woolen cloth after treating with acid and drying, and also for use as a "booster" in front of an ordinary tenter dryer. Initial runs on experimental unit installed in various mills have met with great success.



The manufacturer claims that advantages of this equipment include a great saving in floor space and better cloth as compared with the conventional baking unit. The rays penetrate and dry evenly from within. Therefore, they leave the surface fibres in better condition and eliminate any tendency of the cloth to "yellow." This method also permits a tremendous increase in production, so that, although the operating cost is considerably more than that of conventional baking, the cost per yard of cloth is reduced up to 32 per cent.

New Textile Chart

Scheuer & Co., Consultants and Textile Brokers, 72 Leonard Street, New York City, are distributing the 1941 edition of their Comparative Rayon and Cotton Textile Chart, which they have issued annually for many years. This compilation serves as a ready reference record for sellers and buyers alike. The chart is clearly and attractively printed and has proved its usefulness throughout the industry as well as in Government and educational institutions.

The year 1941 has made textile history on all fronts and, therefore, the data which is portrayed is more significant than ever. The advent of ceiling prices and their influence upon mill margins is graphically shown. All the records are presented on a comparative basis with previous years.

The cotton section includes a price history of 64/60 38½-inch 5.35 (the standard cotton print cloth of the market) covering the years 1932 to 1941 inclusive.

New Commutator Cleaning Stone

"Excess" film and dirt caused by heavy, continuous power loads are said to be easily and quickly removed from commutators with a new Cleaning Stone announced by the Ideal Commutator Dresser Co., 1609 Park Avenue, Sycamore, Ill.

The Ideal Cleaning Stone cleans while the motor or generator is running. It is used by simply holding it against the commutator and slowly moving across the face. The manufacturer claims that the stone does not clog, nor cut the commutator. It also cleans film from the brush seats and helps to reseat brushes.

So-called "excess color," "skin" or "film" resulting from oxidation around paper mills, chemical plants, printing departments, Diesel locomotive generators, etc., are also removed.

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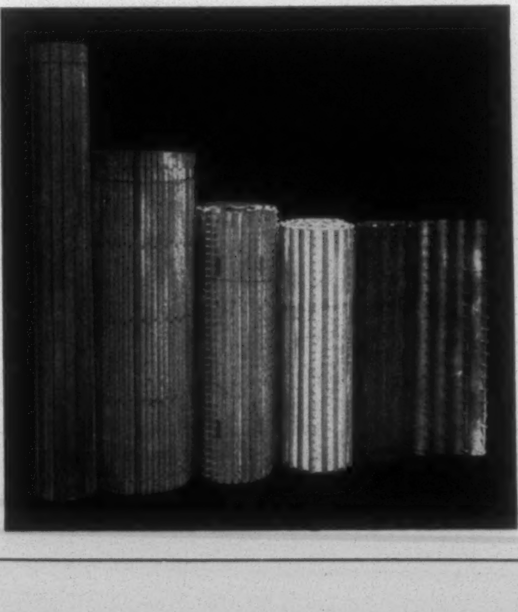

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Urge Cotton Mills To Spread Shipping Throughout Week

A warning that it is vital for shipments from gray goods mills to finishing plants, and from finishing plants to customers to be staggered throughout any given week has been sent to its membership by the Textile Fabrics Association.

A resolution to this effect, adopted by this organization, has been sent to Dr. C. T. Murchison, president of the Cotton-Textile Institute; W. Ray Bell, president, Association of Cotton Textile Merchants; Miss Alice C. Moore, secretary, National Association of Finishers of Textile Fabrics; Russell T. Fisher, president, National Association of Cotton Manufacturers; Herman Chopak, president, Textile Distributors Institute; C. Whitney Dall, president, National Rayon Weavers Association; Carl R. Cunningham, traffic manager, American Cotton Manufacturers Association, and C. T. Kilmore, traffic manager, Georgia and Alabama Cotton Manufacturers Association.

At present, it is explained, it seems as though the greater bulk of all of the shipments of cotton goods, going by rail and by motor truck carriers, are sent on Thursday, Friday and Saturday of each week. The result has been that shipments on Monday, Tuesday and Wednesday usually are light. John Hoey, manager of the Traffic Department of the Textile Fabrics Association, warns that transportation facilities are not sufficient to permit continuance of such an unbalanced situation in shipping.

"In so far as is possible in the purchase of gray goods, we should specify definite dates of shipment and see to it that these dates are spread out over a given week, if such an arrangement can be concluded with the mill," advises Mr. Hoey. "If you have a preference as to the day of shipment, it would be helpful if you would designate part or all of the shipment to be forwarded on Monday, Tuesday and Wednesday."

If the strain on carriers is not relieved through voluntary action of this sort, compulsory steps might follow, comments Mr. Hoey. He states the Interstate Commerce Commission is now considering ways and means of compelling shippers and receivers to make maximum use of transportation facilities.

Not only has the I. C. C. the power to enforce any regulation it believes helpful to the shipping public generally, but also the Director of Transportation is giving this matter his attention, intimates the bulletin of the Textile Fabrics Association. "Any practice that tends to place a burden on the transportation agencies during the latter part of any week, while these agencies are performing very little service during the early part of the week, will not be tolerated," it is declared.

Death of Veteran Butterworth Employee

W. S. Rowley, veteran service engineer with H. W. Butterworth & Sons Co., died at his home in Philadelphia on March 2nd, according to word received by J. H. Zahn, of Charlotte, the company's Southern representative.

Mr. Rowley had been with the company for over 40 years, during which period he had been a frequent visitor to the South and had made many friends in this territory who will regret to learn of his passing.

More N. C. Textile Mills Found Violating Wage Law

Of 248 textile manufacturing establishments in North Carolina inspected during the period from November 1st through February 14th, a total of 64 were found to be in full compliance with the Federal Wage and Hour Law, N. C. Commissioner of Labor Forrest H. Shuford reported.

While the record-keeping regulations were being violated in numerous instances, these violations were not as serious as failure to comply with other requirements of the statute. In 24 establishments the employers were failing to pay the minimum wage of 37½ cents an hour called for by the Textile Wage Order. Violations of the overtime provisions of the statute were found in 40 plants, and six of the mills inspected were violating the child labor provisions. From 15 to 20 per cent of the plants inspected so far were found in violation of one or more of these basic provisions of the law.

Thirty-six mills made wage restitutions totaling $13,342.74 to 724 of their employees during the three and one-half months period. This sum represents back wages legally due the employees under the act but not paid.

The 248 textile plants inspected in the industry-wide drive for compliance employ a total of 85,102 workers who are entitled to the benefits of the Wage and Hour Law. According to Commissioner of Labor Shuford, who under a co-operative agreement with the Wage and Hour Division administers the act in North Carolina, all other textile mills in the State except those inspected immediate before the drive began will be visited for the purpose of securing compliance with the law.

Mathieson Expands To Produce Magnesium and Chlorine

In accordance with a contract which has been signed by the Defense Plants Corp. and The Mathieson Alkali Works, Inc., work on a new plant for the production of metallic magnesium and chlorine will be begun immediately, according to an announcement made by E. M. Allen, president of the Mathieson organization.

The plant, which will be located at Lake Charles, La., and will cost approximately $22,500,000, will be owned by the Defense Plants Corp. It will be operated by Mathieson and will produce about 36,000,000 pounds of magnesium a year by a process developed by Mathieson.

This process differs from other processes for making magnesium electrolytically, in that it does not consume chlorine but produces it in such concentration that it can be collected and liquefied.

The magnesium produced by the Mathieson process is obtained from dolomite, a rock resmbling limestone and consisting of calcium-magnesium carbonate, which will be shipped from nearby quarries. This material is calcined, using locally produced natural gas for the purpose, and the resulting oxides of calcium and magnesium are treated with calcium chloride, a product of the process by which soda ash is made at one of the Mathieson plants, also located at Lake Charles. The mass is then treated with carbon dioxide, obtained from the calcination of the dolomite, which converts the calcium into the insoluble carbonate, leaving magnesium chloride.

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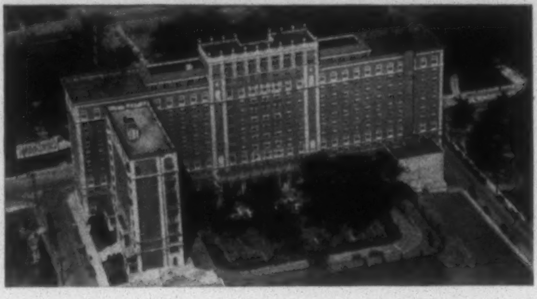

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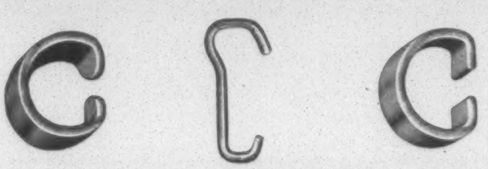

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Reminiscences of Ye Olde Cotton Factory

(*Continued from Page 26*)

gram of industrial development and human progress.

Mill building and operation took on new life, grew larger in size and capacity and began reaching out into broader fields of variety of product. Also the problem of personnel for mill operatives became prevalent, the solution of which was affected by the training of the native Southern population.

A very close relationship developed between the cotton grower and the cotton manufacturer, and a large part of the rural residents eventually moved into the mill communities and became identified with the great army of high quality cloth makers. These "country" boys and girls soon grew into a high type of textile operatives which have been acknowledged as second to none. Beginning at a very early age and working long hours in the mill, as on the farm, blessed with strong, healthy bodies, clean minds and spirits, they faced their daily tasks with a cheerfulness and a firmness of purpose that never failed to spell success. The "little doffer boy" in the spinning room has never been "topped" as a genuine all-the-way-he-boy. He could go in at starting time at early morning, swing a big iron doff box 4 to 5 feet long, about 2 feet deep by 1 foot wide, and mounted on 1½ by 5-inch iron wheels. One end of this box was partitioned off from the other end to separate the empty from full bobbins of yarn. After doffing enough frames to fill the full bobbin end of the box, the doffer boy would go with his "load" of full bobbins of yarn to the "spooler" where he would empty his box into the spooler box, then fill the empty bobbin end of his doff box with empty bobbins, all done by hand. These boys worked in "sets" or "gangs" of 2 to 4 and sometimes 8, depending upon the number of spinning frames to be doffed and the time required for the frames of bobbins to run full. For example, if 5 boys were to take care of, say, 24 frames, and those frames were spinning number 20's yarn, and required two hours to fill up for the next doff, if these boys worked fast enough they could get a rest period when they "got around," and wait until the frames were full again. These rest periods varied from zero to one and sometimes one and one-half hours.

During these rest periods the doffer boys were permitted to play in the mill yard, or sit around and talk, and it can very safely be assumed that a surprisingly interesting assortment of topics came under discussion; in fact, everything from politics and religion to criminals and prize fights, baseball, etc.

The "little spinners" who, with the "little doffers" were the "backbone" of the entire "spinning room," were as gentle and demure as their "brothers" were "adventurous," at the same time they soon learned to "find the answers" to their little problems.

They too, began at a very tender age, and while the operation of piecing ends on a spinning frame is easy to learn and a very interesting performance, it becomes tiresome after so long, the same as other tasks. And so, after a short time they were able to run their spinning frames full fast enough to keep their brother doffers occupied. And, as sometimes happened, the boys decided to "hurry around" and left the spinner's ends down, causing the spinner to "get behind" with her work, the boys were required to help the spinners until time to doff again, thus, these little sisters contributed very largely toward keeping the boys out of mischief, for it was a very serious situation while it lasted, as the "section hand" in charge was required to see that the work was kept in the proper condition at all times. This was not at all difficult as long as "all hands" did their part.

Flax and Its Products

In announcing the release of a revised edition of a 32-page bulletin dealing with the Production and Utilization of Flax and Its Products, Franklin W. Hobbs, chairman of the board of directors of the Textile Foundation, said:

"A widespread interest in flax production, preparation and utilization in the United States impelled the Textile Foundation early in 1934 to call together about twenty-five people for a discussion of the subject from all angles. The desirability of securing additional information and factual data became apparent at the conference, and the Foundation, thereupon, authorized a series of experiments and appointed a committee to plan and define the scope of the studies.

"H. H. Willis, Dean of the Textile School at Clemson, S. C., took charge of the studies and a year or so later submitted a report which encompassed the following subjects: (1) growing of flax, (2) decorticating of flax, (3) degumming of flax chemically, (4) spinning of flax fiber on cotton and other spinning equipment, and (5) manufacture of chemically treated flax into paper.

"Requests for the report came from all over the country and were in such volume as to soon completely exhaust the available supply. Demands for copies continued unabated and last summer the Foundation authorized the preparation of a revised edition. At the request of the Foundation, Warren E. Emley, chief of the Division of Organic and Fibrous Materials, National Bureau of Standards, and a member of the original Flax Committee, undertook the revision.

"The former report was concerned chiefly with the possibility of raising flax in the Southeastern States—a questiton of primary importance at that time. Mr. Emley's revision takes a broader view of the National scene, and includes discussions of not only the experiments in the Southeast, which are still being continued, but also of the utilization of flax by the spinning and paper industries, and of the flax farms of Oregon."

The bulletin may be secured by sending 10 cents in coin or stamps to the Textile Foundation, 10 East 40th Street, New York City.

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Vocational Classes Close With Banquet

Greensboro, N. C.—The White Oak Vocational Night School classes closed February 25th after a very successful term, and the closing was celebrated with a banquet.

There were 83 present at the banquet besides several of the mill officials and key men of the plant. A very interesting report was made to the officials and those present by M. C. Jones, instructor for the past 14 years in warp preparation, plain weaving and advanced mathematics. The report showed that it is very important for the man to prepare himself for promotion when it comes. The following students have received promotions during their attendance or after receiving diplomas:

The students being promoted to loom fixer: James Amos, Burnice Brown, Alvin Herring, Conrad Thornbro, Paul Leonard, Edward Tidwell, Webster Owens, Tommie Pearman, Charlie Reynolds, Charlie Pearman, Alton Stephenson, Ott Wyrick, Robert Honeycutt, Avery Caverness, Neal McDaniels, Calvin Capps, Farrell Davidson and Archie McIntyre.

Loom fixers attending classes are: Clarence Beal, Gilbert Lucas, Henry King, Will Hayes, John Russell, Bill Pennington, Mack Davis, Frank Clark, Walter Wyrick, Ray Laughlin, Robert Wyrick, Marvin Steel, John Cates, Millard Owens, Charlie Smith, Elgie Jarvis and John Moore.

Loom fixers promoted to head fixers: Henry King, Will Hayes, Mack Davis, Avery Caverness, Elgie Jarvis and John Moore.

Loom fixers promoted to second hand: Clarence Beal, Gilbert Lucas, John Russell, Bill Pennington and Frank Clark.

Head fixers promoted to second hand: Henry King, Will Hayes and Mack Davis.

Second hand promoted to overseer: Clarence Beal, overseer of the second shift.

Jake Blake, tie-in man, promoted to second hand.

Twenty-seven per cent of available jobs for promotion filled by students of this class.

Twenty per cent of students have received promotions.

Twenty per cent of total enrollment are filling jobs of promotion.

Forty-five per cent of students listed above have received diplomas.

One hundred per cent of students receiving diplomas have also received promotion.

National Cotton Week To Stress Civilian Adjustment

New Orleans.—National Cotton Week this year will be devoted in the main to furthering the civilian adjustment to the necessities imposed by war-time restrictions, according to Charles K. Everett, director of merchandising of the Cotton Textile Institute, Inc.

Speaking before a special meeting of the Cotton Consumption Council, Mr. Everett explained that normally this trade event is aimed at increasing sales volume but that this year this objective will be subordinated to the task of educating consumers in the conservation and economy required by the war effort. Radical changes in the character of cotton goods production brought about by the intensification of the war and the diversion of a large share of the industry's output into war channels are being reflected in the character of consumption. As examples of the latter, he cited the widespread interest in war work garments and the emphasis being placed by many stores on durable fabrics which can withstand innumerable washings and give extra long wear.

This program is in line with the conservation plans being projected by the Federal war agencies.

Mr. Everett disclosed that he had made a personal survey of conditions in many of the largest retail trading centers of the country over the last five weeks and found that the most retailers he visited were covered adequately for spring and early summer selling of cotton goods. He admitted, however, that the outlook for the fall-winter season as regards supplies was rather mixed, that pinches are likely to develop in some lines, as larger and larger amounts of the products of mills are diverted into essential military channels and that stores before the end of the year would probably have to effect radical readjustments in buying and selling methods in order to provide for civilian necessities.

These readjustments, he explained, would entail the simplification of merchandise assortments and the placing of special emphasis on goods that give extra wear and value.

As the war effort becomes further intensified, stores will have less varied merchandise to offer but the cotton industry is intent on bending every effort to maintain quality standards. Mr. Everett said that supplies of chlorine, an essential in the bleaching of cotton materials, are being rationed to mills and that shortages have begun to develop in dyestuffs required for army clothing and supplies or containing chemicals needed for the making of munitions. Dwindling supplies of materials such as these, he added, represent a challenge to the ingenuity of American designers and manufacturers. He predicted that these obstacles would be overcome and that cotton and home furnishings would continue to be as fully attractive as in those years when surpluses rather than shortages constituted the main problems of mill owners.

While short crops are proverbial in war-time, the speaker said that present supplies of raw cotton would enable the industry to maintain operations at current record-breaking levels while the proper steps are taken to assume the growing of sufficient fiber this year to take care of the abnormal requirements of mills.

Mr. Everett outlined the "personal morale" campaign being undertaken by the cotton industry. This co-operative program will emphasize the cleanliness and hygienic qualities of cotton products and the part they are playing in maintaining the health and morale of the nation. The Cotton-Textile Institute and the National Cotton Council together with the collaboration of the groups making up the Cotton Consumption Council are planning on keeping cottons to the fore through the popularization of the timely theme—Cotton Freshness for Fighting Trim—to be introduced in conjunction with National Cotton Week's observance.

Atlantic Rayon Corp. 1941 Net $160,926

The Atlantic Rayon Corp. reports that for 1941 net earnings, after $59,000 provision for Federal income taxes, amounted to $160,926, as compared to a net loss of $18,902 the previous year.

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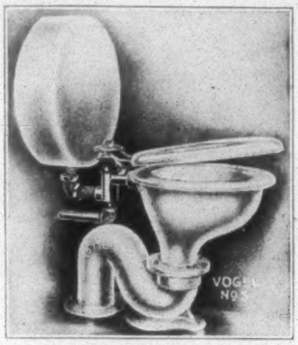

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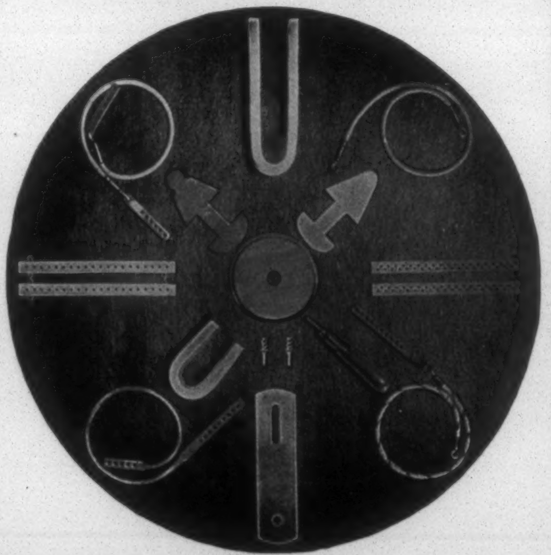

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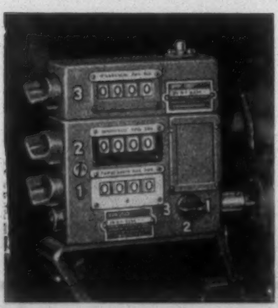

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